Classified

RATES: Fifty words or less, one insertion, $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning and Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS AVAILABLE

AIR CONDITIONING and commercial refrigeration salesmen and sales engineers. Nationally known manufacturer and pioneer in this industry wants experienced men for direct selling and field organization work. Salary and commission to those selected. Reply by letter, detailing qualifications, past experience and present connection. All replies confidential. Our employees know of this ad. Box 880, Air Conditioning and Refrigeration News.

SALES SUPERVISOR to direct the activities of our Commercial Department in the Cleveland territory. Consideration will be given men who thoroughly understand commercial refrigeration and have some knowledge of air conditioning. This opening presents a real opportunity for a man who can assume responsibility and has a good sales record. Full particulars regarding experience and references must be given in first letter which will be held strictly confidential. YORK ICE MACHINERY CORPORATION, 2700 Washington Avenue, Cleveland, Ohio.

POSITIONS WANTED

AMERICAN—capable, taking charge of refrigeration repair shop or service department desires connection with domestic or foreign firm. Available after January first. No objection to traveling. Box 877, Air Conditioning and Refrigeration News.

BUSINESS OPPORTUNITY

FOR SALE, old established good going and growing business, fully equipped good size plant, manufacturing Double Duty porcelain display cases and commercial refrigerators all types, located large eastern city, great opportunity, or will consider partner, experienced. $50,000 or more needed for expansion. For information write Box 873, Air Conditioning and Refrigeration News.

FRANCHISES AVAILABLE

IDEAL LOCATION OPEN for electrical merchandise store in central Florida "The year-round state". Have three good towns where Westinghouse franchise for refrigerators, ranges, radios, etc. can be had by the right party who has had successful sales experience and has $5,000 to finance business. Write P.O. Box 330, Orlando, Fla.

EQUIPMENT FOR SALE

FOR EXPORT and domestic use—reconditioned refrigerators, that look and act like new. Frigidaires, Kelvinator, General Electric, Westinghouse, Norge, others. Starting at $30. F. O. B. New York. Complete renovating, personally supervised in our own factories—that's why they are as good as new. We are the oldest and largest manufacturers of rebuilt refrigerators. Reference Dun & Bradstreet—National City Bank. FEDERAL REFRIGERATOR CORP., 57 East 25th St., New York City.

REPAIR SERVICE

FREE—Did you get yours yet? Price list on repairing electric motors for: refrigerators—oil burners—stokers—water coolers—wash machines and air condition motors. Out of town motors are picked up and delivered by our motor transportation service. Write for our free dealers' price list. P. J. QUINN'S SONS, INC., Electric Motor Repairing, 166 Vernon Ave., Long Island City, N. Y.

GENERAL ELECTRIC and Majestic hermetically sealed units repaired and exchanged. Guaranteed work. Wholesale only. Give model when writing. All prices quoted f.o.b. Chicago. AMERICAN REFRIGERATING ENGINEERS, INC., 2257 Silverton Drive, Chicago, Illinois.

MAJESTIC HERMETIC UNITS repaired and exchanged at $18.50 f.o.b. our factory Chicago. Every unit undergoes complete tests for temperature, cycling, wattage consumption, and quietness on genuine Majestic test equipment from the Grigsby-Grunow plant. Six months' factory guarantee. REFRIGERATION MAINTENANCE CORP., 365 E. Illinois St., Chicago, Ill.

MAJESTIC & GRIGSBY GRUNOW refrigerator and radio parts service. The only original and genuine factory parts and service anywhere in the country. All of our replacements and parts carry our unconditional guarantee backed by this reputable organization. Beware of inferior replacements and parts. GRIGSBY GRUNOW CO., 5801 Dickens Ave., Chicago.

MAJESTICS EXCHANGED or rebuilt $18.50. Genuine Majestic repair and test equipment and parts used throughout. General Electric household units rebuilt $25. Prices f.o.b. Chicago. Six months' guarantee. Complete Majestic parts price list on request. REFRIGERATION PRODUCTS, INC., 122 West Illinois St., Chicago, Illinois.

GRINDING—REFRIGERATION SHAFTS $.50 each. Armatures wound and all types of motors and compressors repaired reasonably. Work done by competent and experienced worker. Over 25 years' experience. "ELECTRON," 122 Hillside Avenue, New York, N. Y.

SCHOOLS

REFRIGERATION AND AIR CONDITIONING is easiest to understand and explain when we have a clear understanding of the fundamentals. Our extension course is especially practical for executives and service men in refrigeration and air conditioning who lack the technical training. DETROIT SCHOOL OF REFRIGERATION AND AIR CONDITIONING, 4125 Grand River, Detroit, Mich.

50,000 copies will blanket the entire market - - -

THE RED BOOK

Questions

Home Air Conditioners

No. 2983 (Distributor, Texas)—"I am desirous of having the names and addresses of several manufacturers of residence air conditioning units, of the self-contained type.

"Please give me these as one of your subscribers, and find enclosed self-addressed, stamped envelope for reply."

Answer: The names of manufacturers of self-contained residential-type air conditioners are listed on page 154 of the 1935 REFRIGERATION AND AIR CONDITIONING DIRECTORY.

For further information about the construction, design, and capacities of the various makes, see the July 29, 1936 issue of REFRIGERATION NEWS in which were published specifications of all types of the leading makes of air conditioning equipment.

Hand Truck Makers

No. 2984 (Dealer Association, Pennsylvania)—"Sometime ago I noticed in your weekly NEWS an advertisement for a device for carrying refrigerators.

"We do not have any information concerning the name of the firm or its address.

"We would appreciate your help in locating this firm and hope we will hear from you very soon."

Answer: We believe you have reference to the Dayton "Carrier Truck" made by International Engineering, Inc., Dayton.

Commercial Sales

No. 2985 (Manufacturer, New York)—"Please wire collect sales commercial machines in 1935 and estimate for 1936 as per chart page 79 REFRIGERATION MARKET DATA BOOK. Also figures for 1935 and '36 for chart pages 81 and 82. Need urgent."

Answer: Sales reported by the Commercial Refrigeration Section, Refrigeration Division of Nema for the year 1935 totalled 116,533 units for machines up to 1 hp. in size. Nema commercial sales for the first 9 months of this year, for all sizes, were 181,980 units. Because of changes in methods of gathering and reporting statistics on commercial sales during past three years we have no estimates of the total done by the whole industry for either year.

Suppliers of Appliance Parts

No. 2986 (Service Man, New Jersey)—"I am servicing refrigerators and have just taken on the servicing of washing machines, vacuum cleaners, and other electrical appliances. I have not been able to locate a firm handling replacement parts in the New York area. Could you let me know where to locate one."

Answer: Firms listed below are suppliers of refrigeration service and replacement parts, in the New York area, and they probably handle parts for other appliances, or if they don't, they can give you the names of companies that do.

Aetna Supply Co.
407 E. 152nd St., New York

Harry Alter Co.
161 Grand St., New York

Federal Refrigerator Corp.
57 E. 25th St., New York

Melchior, Armstrong, Dessau, Inc.
300 Fourth Ave., New York

Paramount Electrical Supply Co.
43 Warren St., New York

Servicemen Supply Co.
1819 Broadway, New York

Calorimeter Manufacturers

No. 2987 (Manufacturer, New Jersey)—"We are contemplating running some tests on a number of small commercial refrigerators up to 1 hp. capacity and would be pleased if you could inform us as to a source from which we could purchase a calorimeter for use in such tests."

Answer: Try the following:

Central Scientific Co.
456 E. Ohio St., Chicago

Cutler-Hammer, Inc.
1333 W. St. Paul Ave., Milwaukee

Eimer & Amend
201 E. 18th St., New York City

Metric Metal Works
Erie, Pa.

Air Conditioning In Photography

No. 2988 (Photographer, Pennsylvania)—"I am informed by the McGraw Hill Publishing Co., from whom I receive the *American Machinist,* that you publish a magazine on the various subjects of air conditioning and refrigeration.

"I am building developing machines for photographic and motion picture work and I am very much interested in anything that pertains to temperature control and air conditioning of drying apparatus for same.

"I believe your magazine will cover such subjects, and put me in touch with manufacturers of certain instruments. I would appreciate it very much if you would send me a sample copy of your paper and price for same."

Answer: The manual and textbook "Air Conditioning Made Easy" written by F. O. Jordan, which is being published in serial form in AIR CONDITIONING AND REFRIGERATION NEWS, presents a clear and easily understandable explanation of what constitutes air conditioning, and provides concrete information on the latest approved engineering practices in the air conditioning field.

Mr. Jordan's manual also tells how to figure installations.

Technical articles on various phases of air conditioning are published from time to time in the weekly issues of AIR CONDITIONING AND REFRIGERATION NEWS. In reading the NEWS, you should find much information on air conditioning that will prove of value to you in your work.

Refrigerator Hardware

No. 2989 (Distributor, New Jersey)—"As we are in the market for refrigeration hardware, we would appreciate two or three manufacturers recommended by you that carry a complete line.

"We are calling your attention particularly to refrigeration hardware, as that is what we are at the present interested in."

Answer: Following are firms who have advertised hardware in AIR CONDITIONING AND REFRIGERATION NEWS:

Grand Rapids Brass Co.
90 Scribner Ave., N. W.,
Grand Rapids, Mich.

Kason Hardware Corp.
127 Wallabout St., Brooklyn, N. Y.

Winters & Crampton Corp.
Grandville, Mich.

Source of Duprene Seals

No. 2990 (Manufacturer, Canada)—"We would appreciate any information you could give us, which would assist us in contacting a source of supply of the new type removable seal face, of the Duprene type."

Answer: For answer to a previous inquiry of this type, we referred the matter to the Rubber Chemicals Division of E. I. du Pont de Nemours, Inc., from whom we received the following reply:

"Refrigerator seals can be made by all rubber manufacturers to whom we supply 'Duprene.' Since we have no restrictions on the manufacture of such products, we rather hesitate to name any one manufacturer.

"If your reader will contact his regular source of supply for rubber goods and finds that he is unable to secure the proper service from them, we will then feel free to definitely recommend a manufacturer to whom he may apply."

The Buyer's Guide

Special rates apply to this column only.
Write Advertising Dept. for full information.

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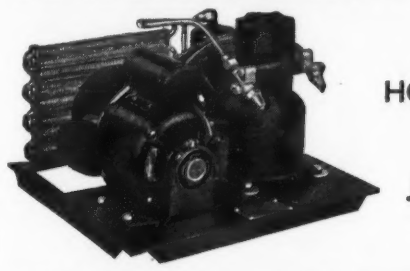
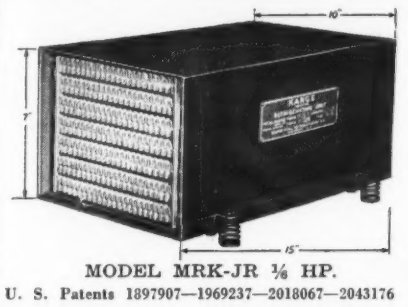
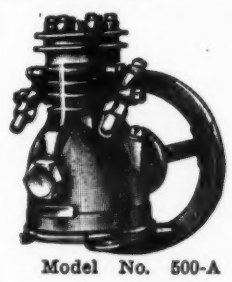
COMPRESSORS
for Commercial Use
Mills Novelty Company • 4100 Fullerton Avenue • Chicago, Illinois

CONDENSING UNITS and COMPRESSORS

FOR HOUSEHOLD REFRIGERATION BY
JOHNSON MOTOR CO.
Waukegan, Ill.
MANUFACTURERS OF THE WORLD FAMOUS SEA HORSE OUTBOARD MOTORS

Commercial Condensing Units

MODEL MRK-JR ⅛ HP.
U. S. Patents 1897907—1969237—2018067—2043176
announce:
Model MRK-JR Model MRK-SR
Precision Built—Direct Drive Compressors — Compact — New Design — Radial Crankcase Adjustment—
Dependable ⅛—⅓ HP.
Replacement Units
Write for Details
Commercial Refrigeration Co.. Inc.
55 South Avenue Rochester, N. Y.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QUALITY-BUILT COMPRESSORS and CONDENSING UNITS
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Sizes: 1/6, 1/5, 1/4, 1/3 h.p.
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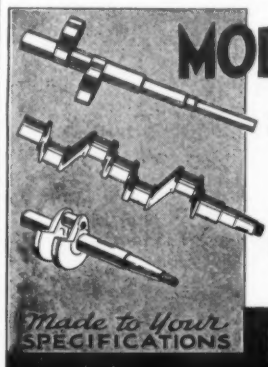
Tecumseh, Mich.
OFFICES
New York 480 Lexington Ave.
Chicago Room 2258 La Salle-Wacker Building
Detroit Export Department 1002 Palms Bldg.
Los Angeles 122 Mariposa St.
St. Louis 577 Arcade Bldg.
Dallas 215 S. Pearl St.

REMPE
FIN COILS - *for Commercial Use*
PIPE COILS & BENDS
Rempe Company, 340 N. Sacramento Blvd., Chicago, Illinois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U. S. GAUGE CO. NY
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All types of Dial Thermometers for refrigeration service, demonstration and original equipment.
Always ACCURATE . . RUGGED . . DEPENDABLE

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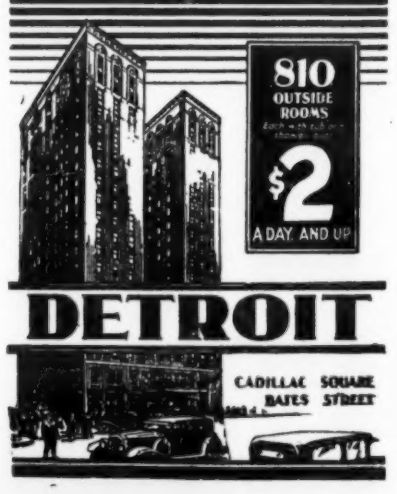

DETROIT

THE NEWSPAPER OF THE INDUSTRY

AIR CONDITIONING AND REFRIGERATION NEWS

WRITTEN TO BE READ ON ARRIVAL

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New Door Style Feature of F-M Models for 1937

'Look Behind Nameplate' Is Promotion and Advertising Theme

By T. T. Quinn

INDIANAPOLIS — Two hundred Fairbanks-Morse distributors and field men, here for their third annual convention last Thursday and Friday, previewed eight models of what General Manager W. Paul Jones of the company's home appliance division called "a new line of refrigerators, from top to floor," and voiced enthusiastic approval to a campaign of advertising and promotion designed to get prospects to "Look Behind the Nameplate."

The new line of refrigerators includes three special models without the Conservador, leading Fairbanks-Morse feature, and ranges in size from 4 to 7-cu. ft. net storage capacity.

The "D" series of units, with the Conservador, includes three models, of 4, 5, and 6-cu. ft. capacity, with single-cylinder compressors, and two more, of 6 and 7-cu. ft. size, with twin-cylinder compressors. The "DX" or special series, without Conservador, includes three single-cylinder units of 4, 5, and 6-cu. ft. capacity.

As in the past, the Conservador will continue to be the feature around which much of the company's sales, advertising, and promotion plans will revolve. Several other improvements in operating, efficiency, and convenience features, however, also have been made.

Perhaps chief of these is a new design in door construction, that seals in cold air by overlapping the food compartment space with two rubber gaskets of double sealed type.

Door construction is unusual also in that the insulation does not project into the food compartment, but is on the outside of the door, worked into a symmetrical design that creates an impression of massiveness without detracting from the beauty of the cabinet itself.

The new door design also permits the doors to be fitted with regular "house door" type hinges, and to be opened all the way out. Greater strength and less danger of sagging are claimed for this method of door hinging.

Interior side of the door is a flat panel, minus bulging edges and screw heads. There is no section which

(Concluded on Page 4, Column 1)

Summer Cooling Is Discussed by Warm Air Association

CHICAGO—"How can we handle the summer cooling problem?" might well have been the theme of the annual convention of the Warm Air Heating and Air Conditioning Association last week at the Stevens hotel here, judging from the emphasis placed on the subject of comfort cooling at the technical sessions of the meeting.

Among the papers delivered at the technical sessions were: "The Calculation of Cooling Load for Installation of Summer Cooling Systems," by Prof. A. P. Kratz of the Engineering Experiment Station, University of Illinois; "Summer Cooling in the Research Residence Using Water at 52° F. and

(Concluded on Page 16, Column 3)

Penn Builds Small Commercial Control

DES MOINES — "Semi-commercial" controls for controlling compressor operation by pressure or temperature, on water and beverage coolers, ice cream cabinets, small display cases, air conditioners, and other "in between" installations that are neither heavy-duty commercial jobs nor light-duty domestic boxes have just been introduced by Penn Electric Switch Co.

Penn has designated its new controls as the "200" series. Both high side and low side (or temperature) control is through one set of heavy contacts in the Magnaseal unit. Each function is said to be performed without mechanical interference with the other.

These new controls may be mounted in any position, because of the features of the Magnaseal contact unit. They are supplied in dual temperature models; low side temperature, low side pressure, and dual pressure

(Concluded on Page 12, Column 3)

WestinghouseDevelops Window Room Cooler

MANSFIELD — Introduction by Westinghouse Electric & Mfg. Co. of a new window-mounted room cooler, embodying ease and quickness of installation with inexpensive operating cost, was announced last week by S. F. Myers, manager of air-conditioning sales for the company.

The new Westinghouse cooler can

(Concluded on Page 16, Column 4)

THE RED BOOK

The 1937 Master Catalog of Air Conditioning and Refrigeration Equipment, Accessories, Parts, Materials, Supplies and Tools to Be Published Mar. 1, 1937.

Who are the business men who will become important factors in the sale of air-conditioning equipment during 1937?

What types of concerns now in business will prove to be most successful as merchandisers of air-conditioning systems?

The fact of the matter is that NOBODY KNOWS who they are or where they are. The business is too young for anyone to be sure of the answers to those questions.

The Red Book—the 1937 Master Catalog of air-conditioning and refrigeration products has been planned to meet this situation.

See back page for further details.

50,000 COPIES

Kelvinator Shipped 309,512 Refrigeration Units in 11 Months

DETROIT — Unit shipments of Kelvinator refrigeration products for the first 11 months of 1936 totaled 309,512 units, compared with 219,672 units during the corresponding period of last year, an increase of 40.8%, H. W. Burritt, vice president, stated last week.

Shipments of household electric refrigerators for the 11-month period, it had been announced previously, totaled 187,027 units.

Kelvinator shipped 38,289 commercial refrigeration units for the first 11 months of 1936 as compared to 26,596 units for the corresponding period last year, according to J. A. Harlon, manager of commercial sales. This is an increase of 43.9%.

Winslow Purchases Prima Mfg. Co. At Court Sale

DETROIT—Dallas E. Winslow, Inc., Detroit firm which is the parent company of Copeland Refrigeration Corp., has purchased the Prima Mfg. Co. of Sydney, Ohio, which manufactures washing machines, in a sale authorized by the U. S. District Court.

According to Dallas E. Winslow, Detroit industrialist who heads the firm which bears his name, the Prima Co. was "bought in its entirety, with the exception of cash and receivables, and will continue operations as a going concern."

Mr. Winslow stated that an inventory of 1,500 completed washers was not included in the court sale, but that his company had made a separate commitment for this merchandise.

The purchaser received the plant, real estate, trade name, good will and patents. Terms of sale were said to be an immediate payment of $25,000 cash and assumption of current obligations.

It is likely that distributors of Copeland electric refrigerators may also handle Prima products.

12 Gibson Models Again Feature Freez'r Shelf

GREENVILLE, Mich.—The Gibson line of household electric refrigerators for 1937, previewed by distributors at meetings here and in Grand Rapids earlier this month, covers 12 models, ranging in size from 4 to 8 cu. ft. capacity, with the Freez'r Shelf standard equipment in all except the smallest unit.

The Standard line includes cabinets of 4, 5, 6, and 7 cu. ft. capacity, and

(Concluded on Page 2, Column 4)

Management Must Sell Self--Moley

By George F. Taubeneck

NEW YORK CITY—Dr. Raymond Moley, editor of Vincent Astor's magazine, *Today*, struck a keynote in the semi-annual conference of the National Federation of Sales Executives, which opened Tuesday at the Biltmore hotel, when he declared that the future of America depends upon business management.

Much of the social reform legislation which has been agitated in recent years has been motivated by distrust of business leaders, it was pointed out. Management not only needs to be sound, but it must sell itself to the public.

The conference went on record, following a talk by Dr. Virgil Reed of the Department of Commerce, favoring the taking of a census on business

(Concluded on Page 13, Column 1)

G-M Progress Parade Begins Second Tour

DETROIT—The 1937 edition of the "Parade of Progress" caravan, sponsored by General Motors Corp., left Detroit Dec. 1 for an extended tour of the south, southeast, and Pacific coast. Director J. M. Jerpe was in charge, assisted by Joseph P. Dever and Harrison Warner.

First showing of the improved "world's fair on wheels" will be at Pensacola, Fla. The caravan, comprising 34 automotive units operated by a crew of 50 men, played its last 1936 showing in Indianapolis in October, after which it was returned here for changes before starting on its 1937 itinerary.

Westinghouse Kitchen Proved Line Is Shown

89 Kitchens Used to Test 19-Model Line Before Introduction

MANSFIELD—A "Kitchen Proved" line of electric refrigerators, stressing five main features, has just been introduced by the Westinghouse Electric & Mfg. Co. for its 1937 merchandising program. This new line of electric refrigerators has been tested in 89 proving kitchens, under all imaginable conditions in all parts of the world.

The five-point program, on which Westinghouse will hinge its advertising and promotion program, in 1937, includes many new and improved features calculated to interest any class or type of refrigeration prospect.

These points are: better food protection, featuring the exclusive Westinghouse "built-in watchman," and scientifically located thermometer; greater convenience through the use of the triple food saver, triple storage compartment, and adjusto-shelf; full power, with the new Economizer Unit which is declared to operate less than 15 minutes out of every hour under normal kitchen conditions; faster freezing, and greater economy, with the claim that scientific meter readings that show electricity for the 1937 Westinghouse refrigerator costs only slightly more than a postage stamp.

Eighty-nine kitchens, located in Tel-Aviv, Singapore, Johannesburg, London, other foreign cities, and in scores of cities in the United States, have been established to test Westinghouse 1937 "Kitchen Proved" refrigerators.

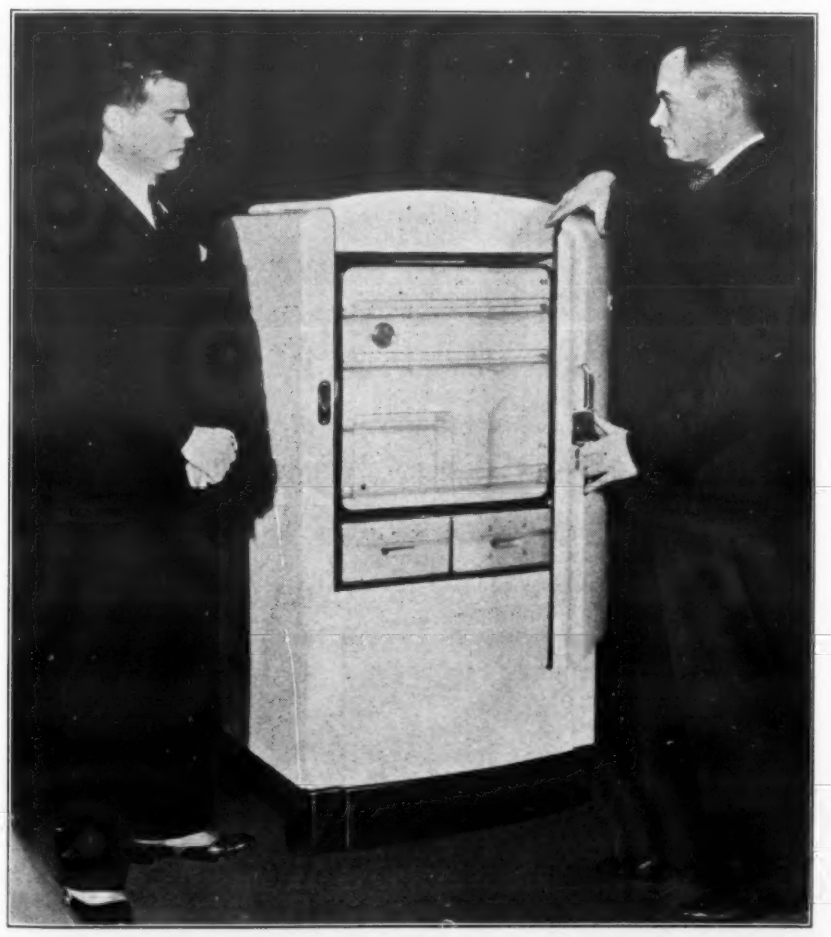
Cabinets lines on the new 1937 series have been refined; the escutcheon plate has been dropped to a position below the door, and an entirely new appearance is obtained. Delphinium blue in one series, and a pleasing shade of green in another, lend a note of color to the water servers, left-over dishes, and other accessories.

Nineteen models comprise the new 1937 line of Westinghouse refrigerators, ranging from the Aristocrat series of deluxe models to the Patrician and Hostess series and three special low-priced models.

The Aristocrat series consists of the FD-50, FD-60, FD-70 and FD-92 models, ranging from 5 to 9.2 cu. ft. of storage space. With the exception of the FD-50,

(Concluded on Page 8, Column 1)

Illustrating F-M's New Door



Chief Engineer Frank D. Peltier demonstrates Fairbanks-Morse's new door construction to General Manager W. Paul Jones.

A New Westinghouse Feature

A built-in thermometer is a new feature stressed in promotion for the 1937 line of "Kitchen Proved" refrigerators introduced by Westinghouse.

Ogden Joins Edison G-E Com'l Staff

CHICAGO—William F. Ogden, formerly of Georgia Power Co., Atlanta, has been appointed commercial engineer of Edison General Electric Appliance Co., Chicago, according to announcement made by C. P. Randolph, chief engineer.

Mr. Ogden's work will be with commercial engineering problems in connection with the new Hotpoint lines of major electrical appliances.

Joining Georgia Power in 1927, Mr. Ogden served in turn in the purchasing department, transmission section of the operating department, and distribution section of the operating department before being appointed superintendent of appliance repairs in 1930.

He has been active also in the association of Edison Illuminating Companies.

York Corp. Increases Pay For 1,250 Workers

YORK, Pa.—A general wage increase, which went into effect on Monday, Dec. 14, for all hourly workers of York Ice Machinery Corp. was announced by William S. Shipley, president of the company. The increases average about 10%, and will affect 1,250 workers.

Grunow Reports Earnings Of $223,463 for Quarter

CHICAGO—General Household Utilities Co. reported for the three months ended Oct. 31, the first quarter of the fiscal year, income of $223,463 after depreciation but before federal taxes. In the corresponding 1935 period the company showed loss of approximately $400,000. Outstanding are 146,619 shares of $10 par 5% preferred stock and 296,750 shares of no par common stock.

There has been converted up to Oct. 31, 1936, according to the company's balance sheet, 42,991 shares of preferred stock. This preferred stock is convertible, share for share, into common.

After allowing for the preferred dividends there would have been available on the 345,301 shares of common stock outstanding as of Oct. 31, 1936, 69 cents a share after all charges, except federal income taxes.

The balance sheet as of Oct. 31, 1936, shows total current assets of $3,391,287.16 and total current liabilities of $1,794,478.27. The working capital of this date was $1,603,808.89. The above period, which was for the first quarter operation that company has three months after receivership, resulted in the most profitable first enjoyed, the report stated.

Heads Promotion Dept.

WILBUR E. SAYLOR
Veteran of refrigeration promotion campaigns, recently appointed to head all Kelvinator sales promotion.

7 New Distributors Named by Leonard

DETROIT—Seven new distributors have been added to the selling organization of the Leonard Refrigerator Co., reports R. I. Petrie, sales manager.

New distributors, and men heading their refrigeration activities, are: Southern Wholesalers, Inc., Washington and Baltimore—W. E. O'Connor, general manager; Graybar Electric Co., Durham, N. C.—John Pearson, manager; A. K. Sutton, Inc., Charlotte, N. C. and Columbia, S. C.—A. K. Sutton, president.

H. B. Shank Co., Ft. Wayne, Inc.—H. B. Shank, president; Earl Goetze, Inc., Kansas City and Springfield, Mo.—Earl Goetze, president; Charles Ilfield, Las Vegas, N. M.; Graybar Electric Co., Phoenix, Ariz.

Klein Stove Plans Dealer Showing Dec. 28-30

PHILADELPHIA—Klein Stove Co., Leonard distributor here, will hold an open house new-line showing for its dealers Dec. 28-30 at the Benjamin Franklin hotel, reports Walter L. Brous, refrigerator sales director.

Mr. Brous announced the appointment of A. C. Horner as sales promotion manager of Klein Stove Co. In his new position, Mr. Horner will devote most of his time to contacting dealers and working out their organization and selling problems with them. He has had 12 years experience in the retail field, selling electric refrigeration.

Display Setup at Jan. Housewares Show Is Listed

CHICAGO—While retail stocks are being depleted in what is claimed to be a record holiday shopping spree, extensive plans for re-stocking stores with the newest in equipment and home furnishing merchandise are being made by the 200 manufacturers who will exhibit goods in the Second International Housewares Show to be held at the Merchandise Mart here, Jan. 4-16.

Two new display setups designed to facilitate store buyers selection of merchandise, will be presented in the housewares floor of the Mart, Jan. 14. First of these is the "Room of Values," in which each show exhibitor will present the article which he considers his topnotch value item.

Second feature will be the Delphinium Blue Room, in which a number of manufacturers, headed by National Enameling and Stamping Co., will present a display of kitchenware and major appliances finished in the new shade of blue—Delphinium.

Here six tables of small ware and six units of larger merchandise, including refrigerators, stoves, and cabinets, will be exhibited together to show the buyer the possibilities of merchandising ensemble groups finished in the new color.

Attendance at the show will be between 10,000 and 12,000 the Show committee estimates; 8,000 buyers had registered to attend as early as July.

Members of the Show committee in charge of arrangements believe that retailers will buy more merchandise this year than they have during the past three years, according to J. Roy Ozanne, Mart Merchandising Counsel and head of the Idea Trading Post.

Behind this trend, states Mr. Ozanne, will be the desire to avoid in the future merchandise shortages like the one which now exists as a result of holiday shopping. That, and the increased prices being put on all types of housewares goods, he believes, will lead retailers and buyers to purchase in quantities and make the 1937 Show an outstanding selling success.

While the Second International Housewares Show is in progress, five other markets will also be going on in the Merchandise Mart. They will house displays of the following merchandise: curtains and draperies, china and glass, furniture, floor coverings, and lamps.

High spot on the entertainment program scheduled in connection with the Show will be a Monte Carlo Casino party to be held at the Medinah Athletic Club, Jan. 12.

Text of Illinois Law On Resale Prices

CHICAGO—Following is the full text of the Illinois fair trade act, enforcing price maintenance on branded or trademarked items, which was recently upheld by the U. S. Supreme Court.

An act to prevent trademark owners, distributors, and the public against injurious and uneconomic practices in the distribution of articles of standard quality under a trademark, brand, or name.

Section 1. No contract relating to the sale or resale of a commodity which bears, or the label or content of which bears, the trademark, brand, or name of the producer or owner of such commodity and which is in fair and open competition with commodities of the same general class produced by others shall be deemed in violation of any law of the State of Illinois by reason of any of the following provisions which may be contained in such contract:

(1) That the buyer will not resell such commodity except at the price stipulated by the vendor.

(2) That the producer or vendee of a commodity require upon the sale of such commodity to another, that such purchaser agree that he will not, in turn, resell except at the price stipulated by such producer or vendee.

Such provisions in any contract shall be deemed to contain or imply conditions that such commodity may be resold without reference to such agreement in the following cases:

(1) In closing out the owner's stock for the purpose of discontinuing delivery of any such commodity: provided, however, that such stock is first offered to the manufacturer of such stock at the original invoice stock price, at least ten (10) days before such stock shall be offered for sale to the public.

(2) When the goods are damaged or deteriorated in quality, and notice is given to the public thereof.

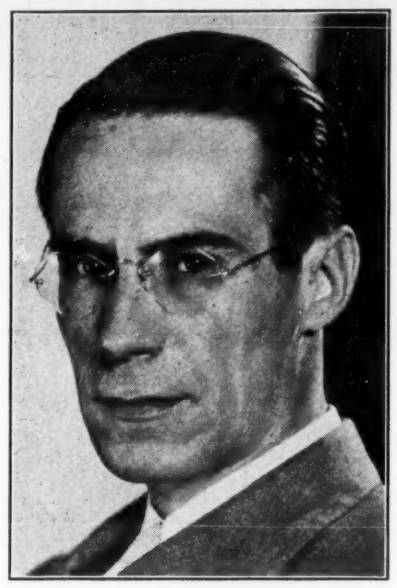
(3) By any officer acting under the orders of any court.

Section 2. Wilfully and knowingly advertising, offering for sale, or selling any commodity at less than the price stipulated in any contract entered into pursuant to the provisions of section 1 of this Act, whether the person so advertising, offering for sale, or selling is or is not a party to such contract, is unfair competition and is actionable at the suit of any person damaged thereby.

Section 3. This Act shall not apply to any contract or agreement between producers or between wholesalers or between retailers as to sale or resale prices.

Section 4. This Act may be known and cited as the "Fair Trade Act."

Advertising Manager



C. C. DeWEES
Whose appointment as advertising manager for Stewart-Warner radios and refrigerators was announced last week.

2-Cylinder Sealed Unit Powers Gibson

(*Concluded from Page 1, Column 4*)

the Custom Built group 5, 6, 7, and 8 cu. ft. models with both lacquer and porcelain exteriors. Cabinet designs are by Kenneth C. Welch, well known stylist.

Gibson's twin-cylinder hermetically-sealed MonoUnit compressor has been retained in this year's line of refrigerators, with only minor refinements added. The Freez'r Shelf is included in all models except the 4 cu. ft. Standard unit, and is claimed to furnish more usable food storage space, together with greater freezing capacity.

Prominent among other convenience features added to this year's Gibson line is the "Swing-Shelf," a basket shelf which swings outward at the touch of a finger, exposing its contents and making easier the selection and replacement of much needed food articles.

One hundred and twenty-five eastern distributors attended the Grand Rapids convention, held in the Pantlind hotel, and conducted by F. E. Basler, newly appointed sales manager of Gibson.

Distributors were greeted and welcomed to the convention by President Charles J. Gibson. John L. Stephens, sales promotion manager, next demonstrated the uses of each of the company's sales promotion pieces and displays, and announced details of the company's advertising and merchandising program, based on what he termed a "four-essential formula."

The design and operation of the MonoUnit compressor was explained by W. D. Krauter, Gibson service manager.

Airtemp Names Fors Works Manager

DAYTON—Appointment of Arthur R. Fors as works manager of Airtemp, Inc., manufacturer of air-conditioning and automatic heating equipment, has been announced by A. C. Downey, President. Airtemp, Inc., is a subsidiary of Chrysler Corp.

Mr. Fors has been identified with Chrysler Corp. for several years in plant supervision and management of manufacturing and production.

Utility Employes Sales Increase in 10 Months

NEWARK—Sales of electric and gas appliances resulting from leads turned in by employes of Public Service Corp. of New Jersey not regularly engaged in selling work showed a 59.3% increase in the first 10 months of this year over the corresponding period of 1935.

Each division of the company showed an increase over the 1935 period, Central leading with 137.8%. Essex was next with 123.3%. Among the districts, Perth Amboy led in percentage of increase, with Bayonne second.

Crate Undercoating Used For Electric Home

POCATELLO, Idaho—The house that Steve built is General Electric even to its undercoating. Steve Rhoads of the Idaho Power Co. was building a new home. He decided to use the plywood from General Electric refrigerator crates as an undercoating beneath the cedar siding in his house.

To obtain enough of this wood, Mr. Rhoads had to sell 55 refrigerators. So his crew of salesmen went to work, and by the time the carpenters were ready, the necessary 55 box crates were too.

The house, complete, will have a General Electric Flatop refrigerator, an electric range, and a water heater.

San Diego Auto Electric To Distribute Crosley

SAN DIEGO, Calif.—San Diego Auto Electric Co. has been appointed Crosley distributor in this territory.

KRACK ENGINEERED
LIFETIME COILS AND UNITS
REFRIGERATION APPLIANCES, INC.
1342 W. Lake Street, Chicago

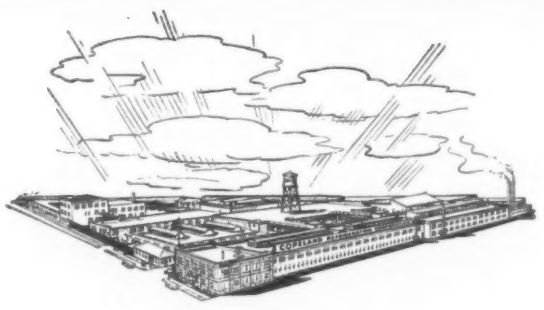
"... an added factor of SAFETY"
V-METH-L
maintains sub-zero temperatures at ABOVE-ATMOSPHERIC pressures

In discussing safety, refrigeration engineers comment on "a possible objection to all machinery working below atmospheric pressure."

V-METH-L (Virginia methyl chloride) provides sub-zero temperatures at *above*-atmospheric pressures. It is not corrosive to copper or iron, hence it permits the use of flanged copper tubing. Its uniform quality, low boiling point, freedom from moisture and acidity, and economy of charging make it a superior refrigerant for medium-size commercial installations.

V-METH-L and Extra Dry ESOTOO (liquid sulphur dioxide) are shipped from 72 distributing points for prompt delivery.

VIRGINIA SMELTING CO.
WEST NORFOLK, VIRGINIA



Copeland, with its new advertising campaign, its new retail finance plans, is headed for a banner year in 1937.

Write today for the complete story of the 1937 Copeland household refrigerator sales program—a program which offers dealers one of the greatest money making opportunities in the history of the industry.

COPELAND
REFRIGERATION CORPORATION
DETROIT, MICHIGAN

PIONEER MANUFACTURERS OF REFRIGERATION

AN OLD NAMEPLATE WITH NEW MEANING

NOWHERE!

but behind the Fairbanks-Morse nameplate

CAN THEY FIND A REFRIGERATOR LIKE IT!

Frankly, aren't refrigerator prospects a little jaded from the repetition of refrigerators with small differences?

Before deciding on your 1937 refrigerator sales activities, make your plans on the basis of whether or not you are going to sell refrigerators which, as far as prospects are concerned, look but little different from the one they will see down the street, across the street, and in thousands of stores everywhere.

Fairbanks-Morse dealers will have something different to make their plans more productive—a refrigerator line with a big, sales-compelling difference. A refrigerator that has every feature offered by all other refrigerators, *plus* a big, easily seen, easily understood feature—the NEW CONSERVADOR.

THINK OF THESE:

A refrigerator which out-economizes the most economical; which secures economy without sacrificing any ability to protect food during a heat wave. A refrigerator from which two-fifths of the food can be removed without opening the main food compartment. A refrigerator with a twin-sealed door—the first modern door in the industry—simplified temperature control—automatic overload protector that resets itself—and a host of other features. A refrigerator whose low cost of operation you can prove, not in kilowatts, not by comparison, *but in pennies*—and do it right on your salesroom floor!

And think of the new Conservador! Only Fairbanks-Morse can give it to you to sell. Only behind the Fairbanks-Morse nameplate will you find the Conservador and such a host of worthwhile features.

Only behind the Fairbanks-Morse nameplate can you find a refrigerator that gives you the final, big difference that puts over a sale when small differences fail.

Write, phone, or wire for name of your Fairbanks-Morse distributor. In justice to 1937 profits, do not close your line without first seeing Fairbanks-Morse Conservador Refrigerator. Fairbanks, Morse & Co., Home Appliance Division, 2060 Northwestern Avenue, Indianapolis, Indiana. Other Fairbanks-Morse Products: Washing Machines, Ironers, Radios, Automatic Coal Burners.

FAIRBANKS MORSE

Conservador Refrigerator

Automatic Overload Protector Engineering Feature of 1937 Fairbanks-Morse Line

(*Concluded from Page 1, Column 1*)

projects into the cabinet.

As a result, the Conservador is moved up flush with the door opening, taking up the space ordinarily occupied by the refrigerator door, and permitting more food storage room than formerly in the regular cabinet interior.

General cabinet lines are more massive than last year, with the symmetry of contour that characterized those models being retained.

A new two-way door latch permits opening of the outer door only, or of the outer door and the Conservador together, at the owner's option. If the outer door is open, the Conservador only may be opened by pressing a small button in the latch assembly.

A food file arrangement has been added, fitting into the lower part of the cabinet flush with the Conservador, the three combined making available about two-fifths of the food stored in the unit without the necessity of entering the main food compartment.

A thermometer, mounted on the Conservador, registers temperatures inside the main food compartment.

Several refinements have been made in the Conservador itself. Hinges supporting it have been strengthened, and a space for storing a quart bottle of milk has been provided. The door swings open wider, for easier accessibility to the cabinet interior. Separate Conservador shelving has been provided; the shelves are now removable one at a time for cleaning.

Ice trays in most models containing the Conservador are of Presto rubber grid type, for easier ice cube removal.

Shelves are mounted on soft rubber supports, and are of the "underslung" type, to prevent slipping and vibration.

In the two large Conservador models a storage compartment is provided in the front part of the cabinet base, ahead of the condensing unit.

All models have Dulux exteriors, while interiors are of acid-resisting porcelain. Sides and top of all models are removable, and may be returned to the factory for replacement in case they are damaged in the field.

Condensing unit is spring-mounted, and is dual-balanced to further dampen vibration and insure quiet operation. Condenser style has been changed, and the size of condenser-to-receiver tubing increased. Each machine unit is equipped with an automatic belt-tightener motor.

Another engineering feature is a new type automatic overload protector on the electric motor, operating on a thermal relay principle, eliminating the necessity of manually resetting the control. Should an overload condition cause a temporary interruption in the unit's operation, the refrigerator will automatically resume operation as soon as the overload condition passes.

If the overload condition continues over a long period, the control will cut the motor in and out often enough to maintain safe cabinet temperatures, resuming normal operation whenever the condition is permanently relieved.

Evaporator in this year's F-M units is oversize and of new design, the injecto-flooded type, and is claimed by F-M officials to provide faster freezing, with reduced operating expense. Capacity of motors in the models has also been increased, without sacrificing economy, it is also claimed.

New operating economy claimed for the 1937 line was verified by the "hot room" tests made on three models, supervised by the City of Indianapolis Bureau of Weights and Measures.

The tests were conducted by M. H. Rector, deputy inspector, with the cooperation of Frank D. Peltier, Fairbanks-Morse chief engineer. Three models of varying size, 4, 5, and 6 cu. ft., were sealed in a "hot room," together with the necessary testing instruments.

Temperatures were set at 110° F., and kept there for a period of 24 hours; a second test was made with the room temperature set at 90° F. Wiring to the refrigerators was passed through sealed electric meters, then through synchronous electric clocks that recorded the exact time the refrigeration mechanism was in operation.

An average temperature of 45° F. was maintained in the refrigerator food compartments during the testing periods.

Charts of the tests at 90° room temperature follows:

Model	Kwh. Used	Running Time (Hrs. & Mins.)	Per Cent Running Time
DX-4	.922	4:20	18.06
D-5	.883	3:54.5	16.28
D-6S	.796	2:27.5	10.23

In the 110° room, the results were as follows:

Model	Kwh. Used	Running Time (Hrs. & Mins.)	Per Cent Running Time
DX-4	1.566	7:39	31.85
D-5	1.583	7:24.5	30.83
D-6S	1.295	4:08	17.21

To demonstrate this operating economy to their prospects, dealers will have available a "Penny Meter," a regular electric meter which will show how much it actually costs to operate the refrigerator in their own territory.

Instead of registering kilowatt-hours, the meter's face will show how much current, in pennies, the unit has consumed. Gearing of the meter may be changed to conform with local kwh. prices of electric current. At the same time, twin thermometers will register temperature inside the food compartment and in the showroom itself.

Fairbanks-Morse's advertising campaign for 1937, outlined by Advertising and Sales Promotion Manager John S. Garceau, will be built around the slogan, "Look Behind the Nameplate." National magazines to be used include *Saturday Evening Post*, *Collier's*, and *Good Housekeeping*.

Supplementing this will be an intensive campaign of national trade paper advertising, designed to obtain as wide a dealer coverage as possible this year. Mats for local newspaper advertising will be available to distributors, and through them to dealers.

Sales literature includes a colorful line folder, two separate broadsides on the "economy" and "convenience" features of the 1937 line, a deluxe presentation book, and "blanket coverage" newspapers in both regular and tabloid sizes.

A pocket data book, similar in size to the one issued by the company last summer on its radio line, will be available for salesmen, as will complete specifications sheets.

A series of slide films, one aimed at selling the dealer on the merits of the F-M line, the other for prospect sales use, will be available in the near future, it was announced.

All advertising and promotion during the year will stress the theme, "Look Behind the Nameplate," and will continue to have the Conservador as outstanding sales feature.

Presentation of promotional plans for the year was made at the convention by Paul Eckstein, assistant advertising and sales promotion manager.

Leading the floor and window displays will be the "Penny Meter" testing unit, carrying the slogan, "Pennies Mean Dollars," and stressing the savings theme. Another display shows the Conservador with a table at one side holding the amount of food that may be stored in it. A third display opens and closes a cardboard refrigerator door, permiting a glimpse of the Conservador behind it.

The convention was formally opened with a 15-minute broadcast over radio station WIRE, Indianapolis, direct from convention headquarters. Mayor John W. Kern, introduced by General Manager Paul Jones, welcomed distributors to the city. In less than a year, he said, Fairbanks-Morse had made a place for itself in the industrial life of the city.

He stressed the importance of the home appliances manufactured by the company, and their effect on the health, convenience, and enjoyment of the people who purchased and used them.

Key Specifications of 1937 Fairbanks-Morse

Model	Capacity (Cu. Ft.)	Shelf Area (Sq. Ft.)	No. of Trays	Ice Cubes	Lbs. of Ice	—Exterior Dimensions— Height	Width	Depth
(With Conservador)								
D-4	4.37	9.25	2	39	4	51¼	23¾	23¾
D-5	5.14	10.40	3	60	6	54½	25¼	23¾
D-6	6.17	11.60	3	57	6	57¼	28½	24½
D-6S*	6.14	11.90	4	78	8	57¼	28½	24½
D-7*	7.11	11.90	4	78	8	68½	28½	24½
(Without Conservador)								
DX-4	4.37	10.00	2	42	4	51¼	23¾	23¾
DX-5	5.14	10.90	3	63	6	54½	25¼	23¾
DX-6	6.17	12.05	3	63	6	57¼	28½	24½

*Has twin-cylinder compressor.

Jones Expects Great Rise In Appliance Business

In his introductory speech, Mr. Jones called attention to the wide market which awaits merchandisers of home appliances during the coming year. A business meeting, he said, could hardly convene under more encouraging conditions. Business conditions, he said, are better everywhere; the steel and building industries are showing improvement, and steady increases are being recorded in almost all the heavy goods industries.

"Public interest in the products you sell," Mr. Jones stated, "is greater this year than in any previous year. The spotlight of public interest is centered on home appliances.

"Refrigeration sales in 1936 were the greatest in history—and we have had our share of this business. Sales of radios, too, are increasing, despite the so-called saturation in that field. Ironer and washer sales are also exceeding their best marks this year.

"Middle class homes are literally crying for modern home appliances. Next year will see this year's records in these three fields broken all over again.

"Our plans for this year have been carefully made. Last year we experienced a 100% increase in our sales volume. We have, this year, stressed the product—and we believe it will prove to be the best electric refrigerator offered to the American public in 1937.

"This is our company's one hundred and seventh year of operation, so we have a solid foundation of manufacturing experience. We enter 1937 confident of the soundness of our position, our product, and our plans."

Mr. Jones next introduced Mortimer Frankel, assistant general manager of the company's home appliance division, who told distributors that the product and plans which they would see were the result of honest effort and engineering.

Improvements in product and increase in sales go hand in hand, he reminded. He urged distributors to lose no time in obtaining adequate dealer representation. "Get plenty of dealers—and get them early," he advised.

Fairbanks-Morse, Mr. Frankel said, has endeavored to give its representatives a balanced program, offering a line of products which supplement each other seasonally. He advised his hearers not to underestimate the potency of the Fairbanks-Morse name, both in this country and throughout the world. F-M home appliances, he said, are now being shipped to 85 foreign countries.

Expansion in Laundry Field Outlined by Decker

The next speaker, L. M. Decker, laundry equipment sales manager, outlined a broad program of factory assistance in that field next year, including an expanded program of sales promotion, more advertising, an increase in the number of factory field men, and added tools for training laundry equipment salesmen.

Major appliance manufacturers are taking over the laundry equipment business, Mr. Decker said. He cited the advantage gained in advertising a variety of products under a single name, which, he said, department stores have found valuable in years past.

Chief promotion for the coming months will center around a series of home laundry schools for retailers, using the educational approach in popularizing laundry equipment.

The schools follow, in general outline, those usually held in demonstrating and selling the idea of electric cookery. Trial schools show an average attendance of 85 women per meeting, Mr. Decker said.

Plans for the schools include a three-day advertising campaign in local newspapers, the use of key accounts in staging the schools, and a series of radio spot announcements, where possible. The schools at present will be conducted by Faith M. Richards, home service director of the company. Later, plans are to have trained demonstrators in every distributorship to assist in carrying out state-wide educational campaigns.

Parker Ericksen, radio sales manager, urged distributors not to neglect radio business during the next four or five months. Several distributors who have done outstanding jobs with the 1937 F-M radio line were called on, and recounted their experiences.

Economy Foremost in Designing Unit, Peltier Claims

Discussing the engineering objectives of the 1937 Conservador line, Chief Engineer Frank D. Peltier said that convenience and economy features had been uppermost in the minds of the men who designed the units for the coming year.

Economy of performance, he said, is the result of two things: compressor construction, and evaporator performance. Cabinet insulation and structure, he added, were other important considerations, as was the application of insulation to the cabinet itself.

Particular research, Mr. Peltier continued, was given by F-M engineers to the design of the refrigerator door, and several improvements had been effected. In considering convenience features, he said, the aim of the company's engineers had been to avoid mere gadgets and to include only those features which were of real value to the user. Considerable thought had been given to the matter of the availability of food in units of 5 cu. ft. and above.

To assure protection, changes in motor construction to give overload protection, automatically, had been made; in addition several changes in the base construction and mounting of the condensing units had been made, to insure quiet, vibrationless operation, he said.

The workings of the company's inspection department were outlined by Charles O'Neill, chief inspector. Testing equipment used in inspecting cold controls, expansion valves, and other equipment was explained.

Tests are given all equipment used in the refrigerator, Mr. O'Neill said, both before and after it is placed in service. The complete refrigerator is given a 12-hour test after assembly, followed by a sound test, using an electrical device to measure the sound given off by the condensing unit. A final inspection, under a strong spotlight, precedes crating and shipping.

Oren Grafton, crating and shipping engineer, said that 179 tests were made before the crates to be used for the 1937 models were finally selected. He outlined some of the tests which crates must undergo before they are considered safe for use. Durability, economy, and protection are the prinicpal items considered in building crates, he said.

The value of adequate service in building additional sales was stressed by George Glassman, head of the company's service department. Good service, Mr. Glassman said, opens the way for future sales; poor service hurts business.

Fairbanks-Morse will hold its first annual service school at factory headquarters from Jan. 19 to 22, Mr. Glassman announced. The school will cover servicing of both refrigerators and home laundry equipment.

A series of field service schools for dealers also is planned, to be conducted by the distributor's service men. Technical material will be supplied, and factory men will be on hand to assist in running off the meetings properly.

Several additions to the company's field staff have been made, Mr. Glassman said, to assist dealers in setting up adequately trained service departments. He asked distributors to cooperate with the department in its work, especially in seeing that an adequate stock of replacement parts is kept in stock against all emergencies.

Advertising Gives Product Audience, Garceau Says

Introduced as "the man who will give the advertising department the new deal it deserves," John S. Garceau told distributors the chief value of advertising was to give the salesman an audience before which his product could be presented.

No product is good enough to sell itself, but intelligent advertising will go a long way to make the selling job easier, he said.

"There is no need to sell the Fairbanks-Morse name," Mr. Garceau said, "so our advertising job is lightened in that respect. We can use all of our space to sell the product."

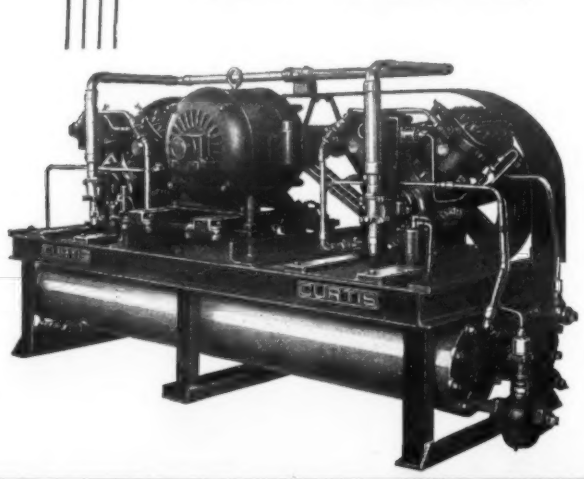
Emphasizing that when you buy magazine space, you buy only blank paper, Mr. Garceau stressed the thought that it is the message, and not the number of advertisements, that really counts.

"Our central theme, 'Look Behind the Nameplate,' will compel reading," he stated. "This theme will be carried out in all our advertising—magazine, newspaper, direct mail, and other."

Factory-trained crews will assist distributors in holding formal presentation meetings to their dealer organizations. These meetings will be staged between Jan. 10 and Feb. 15.

Films for dealer sales training, as well as for use by salesmen in presenting the line to prospects, will be available soon, it was announced.

DEPENDABLE PERFORMANCE — LESS SERVICE, *More Profit*

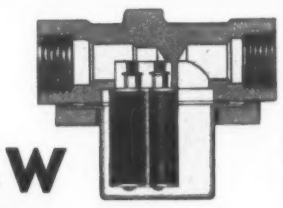


● No matter what the manufacturer's guarantee, there is no profit in service calls. Furthermore, necessity for service calls makes dissatisfied customers.

The solution is dependable performance—the kind you get from the condensing units made by Curtis. Year in and year out, Curtis units perform quietly, economically, efficiently. You'll have satisfied users, if you specify Curtis equipment, and that means more profit. The Curtis name and the Curtis product have been dependable since 1854.

CURTIS

CURTIS REFRIGERATING MACHINE CO.
Division of Curtis Manufacturing Co.
1912 Kienlen Ave., St. Louis, U.S.A.



NEW ZENITH REFRIGERANT FILTER

Two years of successful operation in the better known commercial refrigerator units has proved the value and efficiency of Zenith Filters.

These units are now available to the Jobbing Trade. No other filter compares with a Zenith.

CHECK THESE FEATURES

Patented Element. Full Line of Sizes.
Quickly Cleaned. Easily Installed.
Ample Capacity. Positive Protection.
Leak-proof. Corrosion Proof.

For use with Sulphur Dioxide, Freon or Methyl Chloride.

ZENITH CARBURETOR CO.
Subsidiary
BENDIX AVIATION CORP.
Detroit, Michigan

Frigidaire Sales for 1936 Greatest in Firm's History

DAYTON—The more than 20,000 members of the national sales organization of Frigidaire Division, General Motors Sales Corp., were congratulated this week by E. G. Biechler, general manager, for their efforts in rolling up "the greatest volume in any year in Frigidaire's history" during 1936.

"A deep sense of appreciation prompts us to address this message to the Frigidaire selling organization," Mr. Biechler's statement read. "In 1936, you achieved the greatest sales success in the entire history of the refrigeration industry. During the first six months you sold more Frigidaires than during the entire year of 1935, or any other year.

"A few months ago, we were proud that Frigidaire had sold one and one-quarter million more mechanical refrigerators than any other manufacturer. But now . . . Frigidaire can point to a margin of leadership of over one and one-half million refrigerators."

Engineering and production divisions were praised for their work in designing and building the 1936 products, and the 1936 advertising campaign was credited with assisting the sales efforts of the organization.

New Firm to Handle Frigidaire & Koch

LITTLE ROCK, Ark.—Officers of Little Rock Refrigeration Co., recently organized to handle sales of Frigidaire household and commercial and Koch display case equipment in this territory, are C. D. Cauby, president, Herman Cumnock, secretary-treasurer, and O. C. Stegman, sales manager.

Mr. Cauby, formerly with W. P. Galloway, Memphis, Tenn., and J. P. Galloway, Dallas, has been associated with Frigidaire sales for the past 10 or 12 years. He came to the concern which he now heads from McGregor, Inc., Memphis, Tenn., where he was district sales manager.

Mr. Cumnock was with W. P. Galloway from 1924 to 1934. Later he was associated with Himstedt Plumbing & Heating Co., here.

Mr. Stegman worked for several years with Houck Music Co., here, later managing the radio and refrigerator department of Pfeifer Bros., local department store.

Krebs Named Harrison Credit Manager

NEWARK—W. L. Krebs is now credit manager for Philip H. Harrison & Co., northern New Jersey distributor, and H. C. Honsberger has joined the company as wholesale specialist, according to John Eick, Jr., of the distributor's sales promotion department.

Mr. Krebs formerly acted in a supervisory capacity under J. L. Mahoney in the commercial department. Mr. Honsberger has been merchandise manager for New Jersey Power & Light Co., and executive secretary of the Essex Electrical League.

Philip H. Harrison & Co. recently held a preview of 1937 refrigerators and appliances at its showrooms.

The company will stage its annual Christmas party for employes' children on Dec. 23.

Sanitary Completes Conveyor System

FOND DU LAC, Wis.—Sanitary Refrigerator Co., manufacturer of refrigerator cabinets, has conveyorized its plant preparatory to going into production for 1937, according to Vice President H. B. Miller.

Other equipment installed this fall includes conditioned air water backed spray booths for the application of high bake Dulux exterior finishes. The conditioning equipment makes possible a finer exterior finish, free from dust marking and other imperfections, Mr. Miller says.

New production equipment just installed gives the plant a capacity of 50 cabinets per hour, in addition to the departments employed in the assembly of large mercantile refrigerators and other large special-built jobs, Mr. Miller declares.

Hagle Heads Rackliffe Kelvinator Sales

NEW BRITAIN, Conn.—Mark L. Hagle, wholesale representative since 1931 with Rackliffe Bros. Co., has been appointed sales manager of the firm's Kelvinator appliance division, according to Fred Rackliffe, vice president and secretary.

Mr. Hagle was with the Kelvinator Corp. of Detroit before joining Rackliffe Bros.

WHO'S AFRAID OF THIS BOLD, BAD TRADE-IN?

The growl of the savage trade-in is being heard in the mechanical refrigeration woods. No new thing, the trade-in is growing to fearsome size, his growl has become full-throated, he is beginning to menace the whole countryside.

What is going to be done about this nasty beast?

Already many dealers have girded on their fire arms, but this old trade-in is an elusive fellow . . . he's hard to get a clean shot at. Some dealers can handle him only by feeding him from their own larders—a loss they can never regain.

But here's what dealers who handle Dry-Zero insulated refrigerators can do. To any prospect with a trade-in they can tell this sales story.

Trade-ins frequently are made necessary because of insulation failure. Most insulations become wet in use, thus requiring longer operation of the unit, resulting in increased current cost and accelerated wear on the mechanical parts which depletes the unit long before its time.

In offering a Dry-Zero insulated refrigerator, instead of upping the trade-in allowance to meet competition, point out the advantages of a Dry-Zero insulated job . . . that Dry-Zero Insulation will save from 20 cents to $2.00 per month in cost of operation for the whole life of the refrigerator . . . that the life of the unit will be greatly prolonged because not abused by almost ceaseless operation . . . that this is because Dry-Zero Insulation is the most efficient available and maintains this efficiency indefinitely. Dry-Zero Insulation is unique in this respect because unaffected by the moisture that inevitably penetrates into the wall of any refrigerator in use.

If you do not have this complete story, write for copies of the interesting folder, "How Dry-Zero Insulation in your refrigerator saves you money every month in cost of operation."

DRY·ZERO
REG. U.S. PAT. OFF.
INSULATION
The Most Efficient Commercial Insulant Known

Dry-Zero Corporation, 222 North Bank Drive, Chicago, or 687 Broadview Ave., Toronto, Ontario.

Monetary Lifeblood Begins to Recirculate in Hardened Arteries of Vienna

1. Night life is returning to once-gay Vienna, as witness this dazzling electrical display advertisement for a club. It is affixed to a street lamppost, the globe of which may be seen at the top center of the photograph. 2. Here's how the Frigidaire display windows look on Sunday—all shuttered up. 3. Detroit readers will get a kick out of learning that Vienna has its Free Press newspaper, too. 4. Crowds listening to a broadcast from a Phillips radio promotional truck. Phillips is the first foreign radio to break into tariff-barricaded Austria.

Around the World

With George F. Taubeneck

Vienna is a head which lost its body by the hacking of the political surgeons at the Versailles conference. Once the most thriving metropolis of Mittel Europa, it lost most of its market and means of support after the World War.

Today, wan and thin but still gay, it is attempting to stage a comeback. Editor Taubeneck gives some of the inside story of this comeback, as related to him by native Viennese merchants and engineers, in the current instalment of his "World Series."

Germany Competes

Competition from the German household refrigerator industry is commencing to be felt perceptibly by Vienna distributors for American lines, although U. S. Department of Commerce export figures on household units for Austria through August of this year show a greater dollar value than for the whole of 1935.

HANS FINSTERLE, Crosley distributor in Vienna, reflects this belief. Says Mr. Finsterle:

"The German competition is now very perceptible. The distributors of German refrigerators have the goods on open credit, which of course means greater facilities for selling."

Last year the German "Protos" and "Bosch" lines were placed on the Austrian market, the latter with cylindrical space for food storage. Quite recently two other German makes were introduced in Vienna. Presence of these German lines in competition with American makes causes many distributors of the latter to feel a bit uneasy about the future of their market.

"The turnover is not large, but corresponds to the economic condition in Austria," Mr. Finsterle goes on. Buying power is at low ebb due to the severe economic depression of the past several years. The market for American-built washing machines also has been hard hit; very few Austrian families have the means to afford the costs of operating them or other household appliances such as electric refrigerators.

"Notwithstanding," says Mr. Finsterle, "I am sure that my turnover of Crosley refrigerators in 1937 will be at least equal to that in 1936."

From the first of the year to Nov. 1, Mr. Finsterle's distributorship on the Rathausplatz had sold 58 Crosleys, divided as follows: 3 cu. ft.—15; 3.5 cu. ft.—19; 5 cu. ft.—16; 6 cu. ft.—5; 7 cu. ft.—3.

Import restrictions seem to have created the same problem for Austrian distributors that they have in so many other foreign countries where government sponsorship of home companies has erected large tariff barriers, besides placing dead weights in the form of import "permissions" to cause costly hold-ups in getting boxes on sales floors.

Mr. Finsterle declares that he had an import permission for 100 Crosleys this year and hopes to be granted government approval to bring in the same quantity in 1937.

"Only the dealers who were established in the beginning of electric refrigeration in Austria receive any import contingent at all," Mr. Finsterle states.

The Allgemeine Elektricitats-Gesellschaft (there's a twister), of which Mr. FLOHR is director, is a German firm operating in Vienna at Wien VI, Gumpendorferstrasse 6. The company operates a branch factory for motors in Vienna, too.

The company sells Santo (a German refrigerator), Hotpoint equipment, and a few Monitor Tops.

NEWS export figures for last year show that 345 household models with a dollar value of $24,849 went from this country to Austria. This year, export statistics from January through August set the dollar value of Austrian imports from the United States at $26,791—already almost $2,000 above the 1935 total.

American-built commercial units exported to Austria totaled 120 last year, valued at $11,893. The figure for the first eight months of 1936, based on this, shows a decrease as only $6,551 worth of commercials up to 1-ton were sent to Austria during that period.

The parts market seems to be taking the upgrade course in Austria that it shows almost uniformly this year throughout Europe. Last year only $14,759 worth of American refrigeration parts were shipped. By Sept. 1 of this year, the figure stood at $25,751.

As a personal suggestion to American refrigerator manufacturers seeking to meet the specific design demands of the Austrian market, Mr. Finsterle says that he would like to see cabinet tops flat in the smaller model ranges. Those he is selling are curved, he writes. The reason for this is that most Austrian housewives want to use the tops of their refrigerators as a shelf to afford added space in their kitchens.

* * *

Other Appliances

The depression that has prevailed in all lines of business during the past several years has reduced the purchasing power of the Austrian population to such an extent that very few families can now afford to pay the cost of operating an electric washing machine, or similar household appliances, even if they could purchase them, declares Consul General James Barclay Young.

The small demand is set off by cut-price offers, and local distributors are suffering from sharp competition between a number of American, German, and domestic makes.

One difficulty in introducing such machines in Austria is the inspection which they must undergo by the Elektrizitaets Werke der Gemeinde Wien (Vienna Municipal Electric Plant); only with the approval of the electric company can the owner of such machines obtain the necessary electric power. It is, of course, not possible to sell the machines until this approval is granted as the owners might not be allowed to use them.

Air-conditioning systems, even electric fans, are not used extensively in Austria. This country is about the same distance from the North Pole as St. Johns, Newfoundland, and such relatively hot periods as occur during the summer months never last more than a few days.

Moreover, as most Austrian industries are working at low capacity there is very little money available for the purchase of modern air-conditioning equipment by industrial or commercial prospects.

Nevertheless air conditioning has gained ground also in Austria during recent years, the most important purchasers having been public offices, Federal Railways, tobacco and automobile factories, and the large moving picture theaters. On the other hand, the purchase of room coolers by private individuals is practically unknown. Most of the air-conditioning equipment sold in Austria has been of domestic origin and there are several factories in this country producing such equipment.

In the opinion of several leading distributors of household appliances, there is practically no prospect of developing a market in Austria for American electric and gas ranges, for the reason that the market is glutted with cut-price products of the domestic industry, which is very well developed, including a considerable number of more or less important factories.

* * *

Austrian Currency

The Austrian monetary unit is the schilling, consisting of 100 groschen, and having a par exchange value of approximately $0.2382. Up to 100 schillings in silver are legal tender, and silver coins of five and two schillings are accepted in unlimited amount by Federal agencies. Gold coins are unlimited as legal tender.

Control of foreign exchange operations, including the movement of bullion and currency, is vested in the Austrian National Bank.

The Bank also has the sole right to issue notes, such paper money being legal tender for all purposes, including customs dues and taxes. The use of checks is confined largely to drawings on the postal-savings banks.

One gold crown is convertible into 1.83 paper schillings.

Visitors leaving Austria are examined at the border to see that they have less than 200 schillings in their possession.

* * *

Gone with the Windsor

When Edward VIII, Duke of Windsor by the grace of Premier Baldwin, the Archbishop of Canterbury, and the most famous woman in world history since Helen of Troy and Cleopatra, chose Vienna as a place where his harrowed brow might unfurrow in the most ameliorating of surroundings, he knew what he was doing.

As the Prince of Wales, he had seen the best of the world's best. And it is said that he prefers the Riviera for health, Budapest for fun, and Vienna for comradeship and fine living.

Outside of substituting Honolulu for the Riviera (and at that, it's almost a toss-up), this novice world tourer doesn't see how the Duke's selections could be improved.

Vienna has always been known as

(*Concluded on Page 7, Column 1*)

Vienna Loves a Parade

Parades—religious and military—are an inescapable feature of daily life in Vienna.

Photographic Exploration of Viennese Architecture Reveals Stability with Originality

1. Youth organization on parade. Subjected to the twin Italo-Germanic influences, Vienna Marches On. 2. Editor Taubeneck rings the doorbell to obtain admittance to the office of Ignaz Gellert & Co., which manufactures household electric refrigerators for the Austrian market. The taxicab driver who took the picture, with the editor's camera, was apparently a bit cockeyed. 3. This shot of the interior of the portico to the State Opera House is considered by the editor to be the best he took in Austria. 4. Steeple of St. Stephen's cathedral, framed by buildings rearing up from one of the narrow streets which honeycomb the area around the cathedral. 5. Interior of a modernistic restaurant which tops Vienna's newest "skyscraper" (14 stories).

Austrian People Are Far from Uniform in Appearance, Habits, Thoughts, or Ideals

1. Many types of modern Viennese are seen in this snapshot: the famous doctor, the lady of society, the peasant woman, and everyday folk. 2. A Tyrolean outlander, leather shorts and all, comes to the big city. This season the Tyrolean hat, feathered and corded instead of banded, has become popular in England and the United States. Here is the original, authentic version. 3. Typical Austrians (note girl's costume) at a railroad way station. 4. Viennese schoolboys, snapped while waiting for a bus. 5. Austrian girls in native costume, peddling sweetmeats.

(*Concluded from Page 6, Column 5*)

a gay place. It has been honored for its music, respected for its drama, praised for its food, and loved for its people. But Vienna suffered a depression—oh, what a depression!—after the disastrous conclusion of the World War, and visitors who knew the Old Vienna cried when they saw the sadness and poverty of the new, so they stopped coming.

Now there was a dilemma for the Austrians. They had lost their fine lands—as we shall see later on in this study—and they had lost natural resources, and a great portion of the people who provided a natural market for Vienna's well-established industries. To top it all off, the dependable tourist trade departs saddened, and does not come back.

So what did the Austrians do? Smart people, they capitalized on their chief weakness: the unproductive territory left them by the Treaty of Versailles.

After the Powers had partitioned off Austria's lands, she had little left but scenery. So she sold scenery! Fine, mountainous scenery it was, too; no good for cultivation, but thrilling to look at and to ski upon. With low prices and courteous treatment, plus modest promotion, Austria was soon wooing tourist trade away from Switzerland and France.

Liking that courteous treatment and friendliness, and appreciating the lower prices, tourists began to drop over to Vienna from the Austrian Tyrol, and it wasn't long before the theaters and night clubs and concert halls began to reopen.

And now Vienna is once again popular, once more charming and gay. Americans like it especially, and quite a little colony of permanent and "regular transient" visitors from the United States has taken root there. The Duke of Windsor merely confirmed a trend.

* * *

What Did You Have?

One night in Vienna I went alone to a famous old restaurant located in a corner of a municipal building; and while there met with two small adventures which were typical of the Viennese spirit which is so attractive to American travelers worn with haggling.

A waiter put me at a table which almost blocked the entrance to a three-cornered booth. A young couple occupied each of the other two sides of the booth, sitting, like me, on leather upholstering. The open side of the table was used by the waiters for serving.

Right away I was stumped by the German menu. My bewilderment, which apparently must have expressed itself facially, soon began to amuse the two boys and two girls who were my accidental companions. Soon they were all trying to talk with me, but I knew no German, nor they any English.

Eventually the four of them consulted together gravely, took a pencil, and marked off three items on my menu, accompanied by much smiling and nodding. I signaled for the waiter, pointed to the three items, and soon got them. They turned out to be a thick soup, a steak surmounted by two poached eggs and a sauce, and a stein of light beer.

The five of us were fast friends after that, of course, and had a lot of fun trying to converse via the sign language and facial expressions. A wandering violinist and accordionist stirred up some fine group singing, in which I tried to join (knowing neither language nor tunes), and we all had a very fine time, indeed.

At length I signaled for the waiter, and indicated that I wanted the check. He didn't understand, and called over a dinner-jacketed man I took to be a manager, and who understood English. When I made known my want, he asked:

"What did you have?"

He didn't ask the waiter—he asked me. Get that: *"What did you have?"*

After weeks and months of being told what I could have, not being given that, and being charged double for something else, that simple question, indicative as it was of trust in the customer, made me a Viennaphile for life.

* * *

Fair Cigarettes

This business of talking English with Europeans is good vocabulary exercise. Of course there are plenty of Europeans whose English is impeccable, particularly in the better hotels. But in the out-of-the-way restaurants and shops, and among the mercantile and manufacturing establishments where I was gathering most of my material, knowledge of English is limited, to put it conservatively.

One asks a question, repeats it in several different forms, is eventually misunderstood, and then starts all over again. A wide range of similes and similar expressions, plus a willingness to sacrifice grammar for simplicity, is needed. And, in addition, patience.

German is the language of Austria, and I knew none at all. Nevertheless the friendliness of the people, their eagerness to do business at a fair price, made the acquisition of the necessities of life a pleasure, instead of an irritation.

Wonder of wonders and glory of glories, I was able to buy cold milk and fair cigarettes—both at a decent price. Cigar and cigarette manufacture is a government monopoly in Austria, and whatever bureau has charge of it evidently does a conscientious job.

Austrians are a moderate people. They maintain a stable currency. Despite the strength of the Roman Catholic church, they are not fanatics, practice toleration and birth control.

Partly because they are yet poor, and partly because they like to walk, one sees few automobiles in Vienna, or anywhere in Austria. There is no traffic problem, and scarcely any accident problem at all. Yet when they do buy cars—like the Steyr, Graef, Stift, Daimler, or Austro-Fiat—they go in for racy streamlining in a big way.

Radio? Yes. But no advertising. Austria's seven broadcasting stations are privately owned, government controlled. Like all European broadcasters, they load programs with political propaganda. More than a million receiving sets are in use; and the owners pay two shillings a month each for the privilege of listening.

There's a big local radio manufacturing industry which has succeeded in setting up trade barriers through which American sets have been unable to crash. Phillips, the Dutch radio which I found all over the world, had just succeeded in running the gauntlet a short time before my arrival, and was staging an aggressive campaign.

Among the popular Austrian makes are the Radione, Hornyphone, Minerva, Telefunken, Eumig, and Kapsch. These sets are also exported to other countries in Europe. You can get any station on the Continent with a three-valve (tube) set, which retails in Austria for around 280 shillings ($56).

* * *

Political Situation

Austria at the moment is squeezed in between two dictatorships, those of Italy and Germany. That colors the entire political situation, and has given rise to two conflicting political movements. One gets its inspiration from Rome, the other from Berlin.

First hold Italy has upon Austria is religious, through the medium of the Vatican. Second is military. Mussolini has furnished Austrian troops with munitions they can't pay for, and demands a measure of fealty as the price of his indefinite credit extension.

Austrian industrialists, moreover, fight bitterly any tendency toward joining forces with Germany, for they fear that pursuance of such course would kill Austrian industries.

Yet there is a strong feeling among masses of the people that Austria has been too friendly with Italy. After all, they were enemies during the World War, whereas the Austrians and the Germans fought side-by-side.

On the surface the problem would appear to have been solved by the Austro-German agreement, which had the tacit approval of Mussolini. But underneath unrest still seethes.

Italy and Germany are drawn together by common aims, ideals, and type of government. England wants to maintain friendship with these two nations because of fear of communism. Germany, the English feel, can be used as a buffer state against the Russian Reds.

But the Austrians, as usual, are in the middle. And Vienna, the European melting pot, does not know which way to turn.

* * *

Sad Remnant

There are really two Austrias: that of pleasant memory, the old, pre-war Hapsburg Empire which dominated Central Europe, and that of today, a little state about the size of Ohio, tucked away in the mountains between Italy, Switzerland, Germany, and the Succession States.

Austria today is a German-speaking, German-thinking remnant of an empire scattered into fragments by the World War and the diabolically injudicial Treaty of Versailles.

Old Austria—rich in beauty, mellow with age, sonorous with music, a land of castles, peasants, gypsies, and splendidly arrayed nobles, with gay, carefree, prosperous Vienna as its wildly beating heart.

New Austria—shrunken in size, haunted by empty castles, no longer wealthy, and with Vienna, her laughter hollow but pathetically merry, like a *grande dame* wearing a faded, worn dress, once a magnificent gown, and smiling hopefully as she explores with thin fingers the holes in the lining of her collapsed handbag.

Austria has been bereft of most of the valuable mineral wealth she once had, almost all of the great plains on which she once grew rich crops; and has been left little more than an assortment of hills and mountains—which, as we have said before, she has capitalized upon by selling the scenery.

The population of 28,500,000 that lived in the old empire has been reduced to a mere 6,800,000, of whom a third are in Vienna.

Austria's predicament: 4,000,000 people living on relatively poor soil must support a city of 2,000,000, which has lost much of its importance as a European political and cultural center. Vienna's industries, once prosperous, are now left with a home market one-fifth the size which they are equipped to supply.

On top of her economic worries, Austria is tormented by a constant fear of war. Austria would find herself in the undesirable position that Belgium had at the beginning of the last war, should Italy and Germany clash.

Il Duce and Der Fuehrer would have to send their armies across the Tyrol, the western extension of Austria, in order to get at each other, and the victor would in all probability annex that territory even if Austria remained neutral. In any event, war on her soil would do Austria no good (which sentence we nominate for the Nobel Prize for Understatement for 1937).

As the pathetic little waiter in Robert Sherwood's play, "Idiot's Delight," responded when asked whom he thought would win the next war: "I don't know who will win, but Austria will lose."

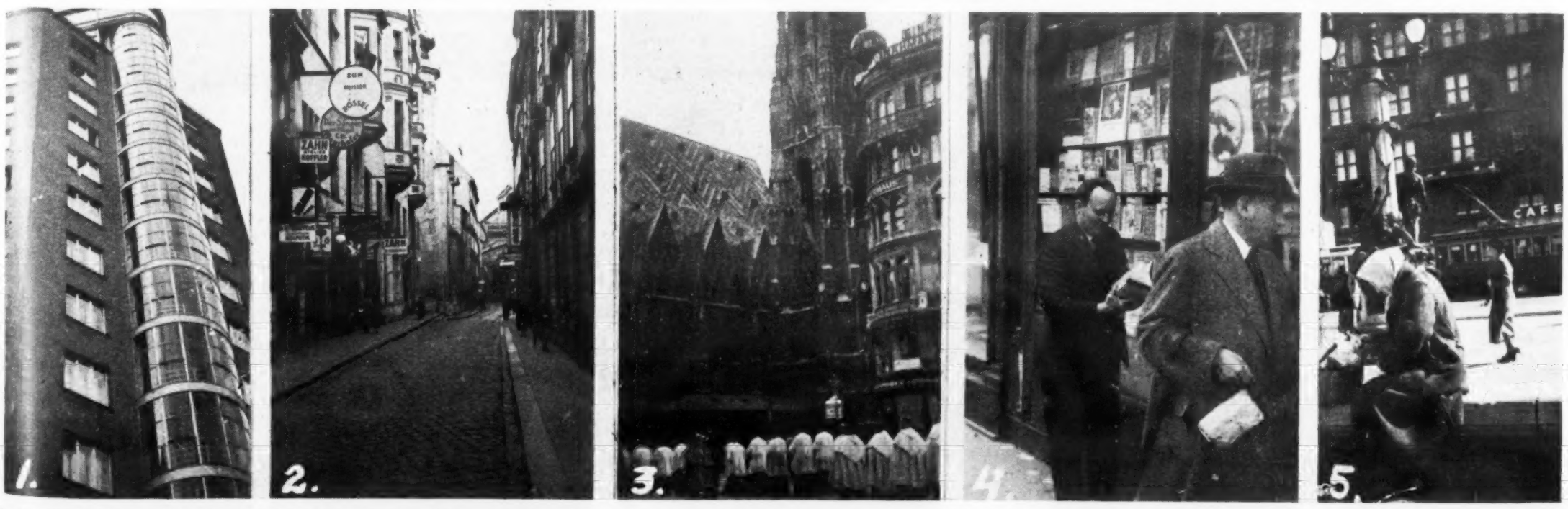
Austria is hemmed in on all sides by other countries, and has no direct access to any sea. Germany, Switzerland, and Italy form a semi-circle around one side, with Czechoslovakia, Hungary, and Yugoslavia around the other.

Politically, Austria is divided into three main factions of thought, there being no political parties such as we have here in the United States.

The three divisions are the Catholic-Corporative Government, now in power, the National Socialist (Nazi) group, outlawed as a party but still striving for unification with Germany under Hitler, and the Social Democracy body, extreme internationalists.

Governmental system of Austria is said to have been patterned after the Corporative State of Mussolini, but it really seems to be more on the style of the French Republic. There is a president, similar to the French president, a chancellor, similar to the French premier, a ministry similar to that of France, a federal assembly consisting of four councils, local provinces with a Landeshauptmann as the chief authority in each, and municipal government under the leadership of a burgomeister, or mayor.

Vienna Is Striking Combination of Modernism Superimposed Upon Antiquity



1. Modernism is the thing in Viennese apartment buildings. 2. Street in old Vienna. 3. Religious procession marching into old Cathedral of St. Stephen. 4. Booksellers' street shop windows are on hinges, so that if you want a book on display, the proprietor—as shown in the picture—merely unlocks the window, opens it, and takes out the book of your choice. 5. Peasant woman stops for lunch on the Ringstrasse.

Westinghouse Claims Tests in Kitchens Prove Unit's Efficiency; Other '37 Appliances Introduced

(*Concluded from Page 1, Column 5*)

which has a capacity of 74 cubes, all Aristocrat models have a capacity of 118 cubes, or 12 pounds.

All models have a ⅛-hp. motor with the Westinghouse hermetically-sealed compressor and unithermic cabinets.

Accessories consist of a built-in crisping pan, dairy basket, and utility basket with tooled satin-finished fronts, delphinium blue triple-food-saver set of Hall vitrified china ovenware; a butter dish and a two-quart water server that match; handy-jack ice tray release, and a built-in food safety indicator.

The Patrician series consists of four models, ranging from the FPS-50 with a net storage space of 5 cu. ft., through FPS-60 and FPS-70 to FP-92, with 9.2 cu. ft. storage space. All models in the Patrician series have a porcelain exterior cabinet finish, the standard accessories in the Aristocrat series, and the same capacity motor, compressors, controls, and other Westinghouse 1937 features.

The Hostess series consists of five models, ranging in net storage space from 3.2 cu. ft. to 7.0 cu. ft. Characteristics of the Hostess series models are: Dulux finish cabinet exteriors; ⅛-hp. motor; accessories and escutcheon plate of moonstone green; a Feather-touch door latch; and the standard Westinghouse motor and control features.

Three "specials" help to round out the Westinghouse line for 1937. These models are the FS-50 with 5 cu. ft. storage space, and the FS-60 and FS-70, with 6 and 7 cu. ft. respectively. All three models have Dulux finish exteriors, escutcheon plate below the door, Feather-touch door latch, chilling tray, porcelain crisping pan, handy-jack ice tray release, and built-in food safety indicator

The line is completed by the DC-20 chest type model; the EPX-135, with 13.5 cu. ft. storage area; and the EPX-200 with 20.1 cu. ft. The EPX-135 and EPX-200 have an ice capacity of 192 cubes; both have porcelain finish cabinet exteriors and ¼-hp. motors.

All Westinghouse models, regardless of their series, have all-steel cabinets with unithermic construction, ⅛-hp. motors, Westinghouse hermetically-sealed units, and exclusive Westinghouse Sanalloy evaporators. Improvements and refinements by engineers have made this all-Freon line unusually quiet in operation.

New design principles, micarta door-frame trims, interior electric lights, flat ribbon type shelves of rust-resisting steel, extra thick Westinghouse approved insulation, black recessed pedestal bases, and the exclusive Dual-automatic control with seven-point temperature selector, are other features characteristic of the entire 1937 series.

Kitchen Proving Campaign In 39 Different Areas

To launch the new line of electric refrigerators and assure its aggressive promotion throughout the sales year, Westinghouse established the "Kitchen Proved" slogan as the keynote of its 1937 selling campaign.

Westinghouse sales officials decided to get back to fundamentals with a selling story which 1937 prospects would be quick to understand and appreciate. The company based its policy on testing its refrigerators by operation under kitchen conditions to which the machine ultimately would be submitted.

Realizing that the refrigerator, once it leaves the factory, will be subject to all kinds of use and climate, Westinghouse established 89 Proving Kitchens representing every conceivable location or situation an electric refrigerator could meet.

Westinghouse Proving Kitchen No. 1 was set up in Belem, (Para) Brazil. Here, within a few miles of the equator, in year-round summer heat and excessive humidity, a 1937 Westinghouse was put through its paces.

Other locations for Proving Kitchens were Shanghai, Bombay, Singapore, Mexico City, Johannesburg, London, Wellington, Athens, Rio de Janeiro, Havana, Tel-Aviv, and some 77 leading metropolitan districts in the United States.

Each of the proving kitchens was equipped with scientific measuring instruments. From them the proving kitchen hostess, assisted by a proving kitchen supervisor, reported results in her home. Her findings, certified on the official report form, were forwarded to proving kitchen headquarters at Mansfield, and there tabulated and recorded.

Operation records were made under normal usage conditions in the homemaker's kitchen. Some of these refrigerators were subjected to conditions seldom met in the average kitchen, and as a result of their performance, operating cost, and efficiency Westinghouse determined the principal features to be stressed in selling its 1937 line.

Survey Made to Find What's Wanted in Ranges

A group of 15 investigators were sent out, and these contacted 71 operating public utilities, 172 successful electric range dealers, and over 800 housewives who had purchased Westinghouse ranges. This investigation was made in selected areas from 17 different states to obtain an impartial cross section of opinion. The investigators were instructed to refrain from exerting the slightest influence on the answers to questions to be asked.

The results of this investigation indicated that 46.9% of electric range users were in the class of skilled mechanics—salesmen, clerical workers, farmers, etc.—medium and low income brackets; 61.4% lived in homes which had a rental value of $40 per month or under; and 82% in homes with a rental value of $50 or under.

Before beginning production of its 1937 line of electric ranges, the Westinghouse survey set out to ascertain just what housewives wanted in the way of features and design, and then to incorporate these demands in the order in which they were expressed.

In the order of their importance, these women said they wanted:

1. Cleanliness, 73.5%
2. Economy of operation, 29.8%
3. Easy to use with resultant saving of time, 27.5%

Simplicity in design, operation, and construction is the keynote of the new line of ranges. Surface units and switches are correspondingly marked with numerals so that the housewife can tell at a glance which switch operates the unit she wants to use.

A new simplified oven heat control eliminates many operations formerly required to set an oven for baking. The new control is a combination switch and temperature regulator.

For 1937, Westinghouse introduces a "Controlled Heat Flow" oven — achieved with a scientifically designed blue porcelain enameled heat "evener" or convector plate. The new Westinghouse heat "evener" causes heat to flow in at the sides and out at the front and back. Consistent results in over 700 oven tests showed that this new feature plus super-accurate helical coil thermostats gave balanced heat that insured better cooking and baking results, with either cold or hot oven start.

Baking wattage in 1937 Westinghouse ovens has been increased to 2300 watts in the bottom heater plus 700 in the top. For fast broiling, the top heater now provides 2400 watts. All ovens in the line have this standard wattage. Baking temperature can be reached from a cold start in about 10 minutes.

Other features of this line are: two ovens which operate independently of each other, the smaller oven effecting considerable economy when small quantities of food are to be prepared; platform lights have translucent glass shades—completely illuminating the platform; clocks can be set and controlled from the front; deluxe ranges have a combination clock and Minute Minder for timing short cooking operations; a portable Econo-Cooker is an accessory which makes it possible to prepare complete meals for as little as one cent.

A warming compartment is provided in which temperatures can be controlled by thermostats to as low as 150°; appliance receptacles are mounted on the top of the backsplasher, one controlled automatically by the clock; a cigarette lighter is placed on the right top of the backsplasher, completely eliminating matches from the "Electric Kitchen"; acid-resisting cooking surfaces prevent staining.

The Emperor is the leader of the line and gives the entire line the keynote for design. It is equipped with two ovens, two large storage drawers, two six-inch and two eight-inch Corox "Economizer" units Econo-Cooker, Minute Minder, Cigarette Lighter, and two appliance receptacles.

The Regent has the same general appearance as the Emperor, but the second oven is replaced by a warming compartment.

A Viceroy model provides one oven and a warming compartment, column mounting legs, platform lights, and two "Economizer" speed units.

The Dictator has one large oven and a roller bearing storage drawer. It is equipped with column mountings, one "Economizer" speed unit, and maintained temperature oven control.

In the Ambassador console or high oven model, the only one in the line, designers have incorporated two "Economizer" units, pedestal column supports, a utility drawer, and standard maintained oven control.

The Conqueror has a large oven and storage drawer, maintained oven heat control, appliance receptacle, and standard leg mounting.

Water Heater in a Modern Kitchen

The new square type Westinghouse water heater is designed to make it a pleasing addition to the modern kitchen, as well as to fit harmoniously into many kitchen patterns. The unit takes up only a minimum of space, and is designed for easy installation.

The Cardinal is an inexpensive, three-unit range which can be mounted on a base cabinet giving additional storage space.

The Coronet is a three-unit range especially designed for apartment house kitchens or those in which space is limited. It can be equipped either with six-inch legs or toe-space mounting. The oven is standard size, placed directly beneath the surface units. It provides ample cooking capacity for the small family.

Line of Water Heaters Broadened to Fit All Jobs

Five water heaters, ranging from 1-gallon to 30-gallon capacities, have been added to the Westinghouse water heater line. The addition of these new heaters is said to permit handling practically any domestic or small commercial application, regardless of water conditions, rate specifications, or other requirements.

The new models are in two classifications: the first, heaters of 1-gallon, 3-gallon, and 5-gallon capacities. These three heaters are specifically designed for isolated installations, where a small quantity of hot water frequently is required, but where large storage capacity is not. They are ideal for garages, filling stations and tourist camps, drug stores and taverns, doctors' and dentists' offices.

The external appearance conforms with the Empire or square casing design of 1936. These heaters may be installed on or under a counter, beneath the sink, in a corner, or on a shelf.

Other new heaters are table top models of 15-gallon and 30-gallon capacity. They are designed specially for installation in kitchens, and are ideal for apartments and small homes, particularly those without basements.

These two heaters are available with either a porcelain enamel or a Monel metal work surface, and here have standard backsplashers as a part of the top. The casings are of standard cabinet dimensions, and will match other kitchen cabinet equipment. A standard 4-in. x 3-in. toe space is provided.

Among other design and construction features in these and other standard models, all wiring is encased in a steel conduit. Metal boxes are provided where the heating elements and thermostats are mounted.

In each heater box, a ¾-in. insulating block is used to assure more perfect insulation of the thermostat and Corox unit, giving additional protection from heat losses at this point.

Convex heads add to the strength and safety of the galvanized copper-bearing steel tanks, and make it possible to drain the heater completely.

Cold water which enters from the inlet pipe is "broken up" by a special curved baffle. The water at the top stays hot, with mixing of hot and cold water minimized.

The top of the tank has a ¾-in. plug, easily removed for the installation of a temperature relief valve. A knock-out in the casing cover provides easy access to the spud.

A special heat trap prevents the recirculation of hot water in the outlet pipe. Heat losses, due to the tendency of hot water to course its way back and forth through the hot water pipe, are minimized.

The cold water inlet extends through the bottom of the tank at its lowest point. A separate drain valve at the bottom of the tank near the front of the heater makes it easy to completely drain the tank or to flush it under pressure.

Allen Presents Line

NEW YORK CITY—A. E. Allen, vice president in charge of all Westinghouse merchandising activities, conducted an informal press preview of the new Westinghouse products for 1937 (as described in foregoing article), at the Waldorf-Astoria hotel Friday, Dec. 18, attended by more than 75 editors and reporters.

"There are several factors contributing to our belief that 1937 will see new records set for the manufacturing and distribution of electrical appliances," the Westinghouse merchandising chief told the press.

"First of all, the average person has more confidence in the future. The average prospect is a little more ready to purchase a major appliance with a comparative high unit value, than he was a year or two ago, because he is more certain of continued employment.

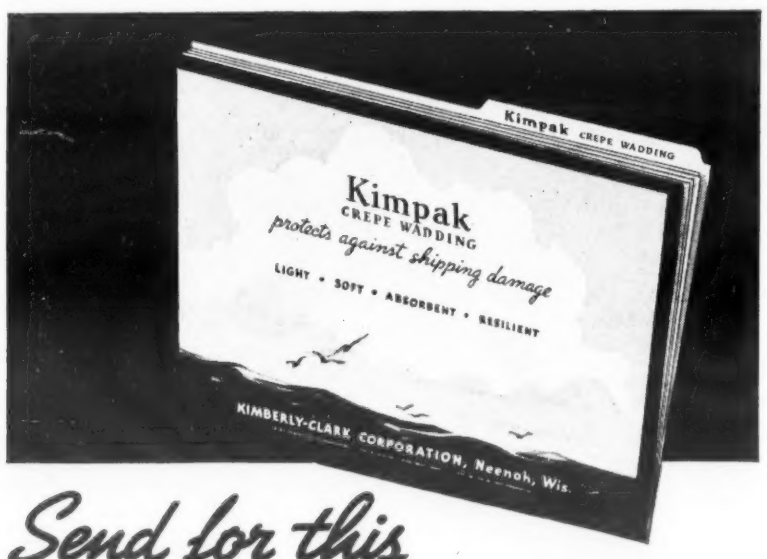
"Credit of the average wage and salaried person has been built up to the point where he has less fear of not being able to meet his obligations, —with the result that he is more ready to purchase.

"Secondly, there is considerably less unemployment, a factor that helps to instill confidence in the future, on the part of both the worker and the manufacturer. Figures and surveys would tend to prove that the list of unemployed has reached a new low point, which is again encouraging.

"In addition, we see everywhere about us plans for new factories, more activity on the part of business on the whole, and no indication that the increased activity will not continue to progress.

"One of the greatest contributing factors in the increased and improved conditions in the electrical appliance industry is the reduction of rates on the part of the utilities. The average rates are the lowest in the history of the country, and the cheapest way to live now is to live electrically.

"And with the improvements made in electric appliances, to live electrically is not only the most enexpensive way to live, but the most convenient and modern."



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Sales Methods

New Booklet by Rust Hills, Electraviser, Gives Consumer Tips on Appliances & Promotes Service Business

BROOKLYN—Titled "For Women Who Want to Stay Young and Beautiful and Men Who Are Not Handy Around the House," a 24-page booklet was issued recently by Rust Hills, who, as an "Electraviser," operates a consumer advisory service on electric appliances here.

Mr. Hills was formerly connected with the sales training department of Rex Cole, Inc., New York General Electric distributorship, and has had this unique service set-up for the past two years. In the title page of the pamphlet he defines an "Electraviser" as:

"An expert in electrical devices for the home who can assist you in their selection, use, and care."

The booklet covers 29 electrical household appliances. It sells Mr. Hill's services by demonstration; it gives numerous instructions and suggestions by which the housewife can increase the efficiency and lengthen the life of the equipment in her home.

Servicing Your Refrigerator

In the section devoted to electric refrigerators, the booklet says:

"If your machine is not hermetically sealed, oil the motor every May, being careful not to drop oil on the rubber belt. At the same time, run your hand vacuum cleaner over the condenser (which usually looks like an automobile radiator and is near the fan) to clean out the accumulated dust which greatly lowers the efficiency of the machine."

Advising the housewife to defrost her refrigerator every two days, the booklet explains " . . . frost on the chilling unit is a poor conductor of heat . . . as it gets thicker the motor runs more or the box gets warmer, or both . . .

"If you are in a great hurry for ice cubes," the copy continues, "fill one metal tray half full; then pour a teaspoonful of warm water on the floor of the chilling unit, and press the tray firmly down on it; set the control at 'coldest.'"

Typical examples of the service charges asked by Mr. Hill are found in copy telling what to do if the latch on the door works hard: " . . . this is usually due to sagging caused by worn hinge pins. Try reversing the hinges—that is, putting the lower in place of the upper (Rust Hills charges 50¢). New gaskets don't cost much ($2.50), and relacquering, like painting a house, is also real economy ($9.00)."

Best Use of the Range

With respect to electric ranges Mr. Hills says:

"Plan your meals so as to cook them all in one place—the oven, the frying pan, or the cooker. Utilize the heat stored in units by turning them off some minutes before you remove the food. Use very little water with vegetables—just enough to cover the bottom of the pan, and turn to 'low heat' as soon as the boiling starts. Violent boiling only wastes current, and cooks no faster."

Especially pertinent for inexperienced housewives is the booklet's information on clothes washing, part of which reads:

"Forget the old-fashioned soaking, boiling, and bluing. Badly soiled garments require only a 20-minute cold water soak with extra soap. The bluing can be added to the washing water. 'Yellowing' is not due to lack of boiling, but to cold water rinsing which sets the soap.

"The only care the washer needs is thorough cleaning and drying, inside and out, after using. Don't forget to empty the drain hose and to release the rolls of the wringer. Once a year empty the drain which catches the pebbles and pins before they go into the pump. Also, annually, oil the motor, and see that there is the proper amount of oil or grease in the crankcase."

Tips on Floor Cleaning

Discussing floor cleaners, the pamphlet says: "If your cleaner does not pick up threads easily, the brush is probably worn down, and should be adjusted to a lower position in the nozzle, or replaced. If the belt slips, you need a new one . . . Push a straight suction cleaner as *fast* as you can, but move a motor-driven-bush cleaner very *slowly*."

Bringing a little sales promotion into the advice, Mr. Hills suggests in his copy on radios: "If you like to be wakened by the radio, or don't wish to miss certain programs, get one of the new clocks which will turn the radio on and off for any period you set it . . . If your radio is some feet from your armchair, an inexpensive push-button cord will enable you to turn it on and off without getting up."

The booklet describes a modern kitchen designed scientifically, and the complete set of equipment with its correct arrangement. Completing this discussion, the sale tie-in is:

"Rust Hills has a complete collection of beautiful kitchen plans which he will loan you if you consider modernizing. Saving the cost of tiling frequently pays for wall and floor cabinets. A well conceived plan can be carried out step-by-step at small annual cost."

Advice on Conditioning

Although Mr. Hills doesn't overemphasize the value of purchasing self-contained unit room coolers, his air-conditioning topic ends up with the following:

"Probably your best bet for one room is an arrangement somewhat similar to that in your refrigerator—a compressor in the basement with refrigerant tubes leading to a chilling unit affixed six feet high to the wall of your room.

"A small fan in the chilling unit forces air over the cold coils and takes out enough moisture and heat to let you sleep comfortably. The 16 cu. ft. of fresh air you need per hour will infiltrate through your closed windows and doors. Be sure that your thermostat on this device is controlled by outside temperatures, since large variations are dangerous."

Final page in the booklet answers eight questions on Mr. Hills service policies, and presents a group of reasons why the housewife should seek his advice on her problems.

The complete list of appliances covered in the booklet is as follows:

Air conditioning; cabinets; chimes; clocks; coffee maker; dishwasher; egg cooker; electric rates; fixtures; floor cleaner; hand cleaner; humidifier; irons; ironer; kitchens; lamps, I.E.S.; Mazda lamp bulbs; mixer; oil burner; radio; range; refrigerator; residential rates; roaster; shaver; sunlamp; toaster; ventilating fan; waffle iron; and washer.

New Hampshire Utility Discovers Paid Admissions to Cooking Schools Yield More Real Prospects

By Winifred Hughes

CLEVELAND—"We are trying to find out if the home service worker can fit kitchen planning into her activities and sell assembled kitchens before we go into this work," declared Miss Delphine Lerschen, home service director of the Public Service Co. of New Hampshire, at Manchester, N. H., attending the Electricity For Better Living conference held at General Electric Institute here last week.

Miss Lerschen has been visiting cities in which kitchen centers are established to get this information, she said. In addition to General Electric Institute, she has gone to Mansfield to see the Westinghouse kitchen center, to Springfield, and she plans to make New York City her next stopping place.

Although Public Service Co. is not yet selling kitchens, its home service department has been using a display coach to sell appliances to customers in its rural territory.

"The coach has a model kitchen installed at the front end, and a display of farm equipment at the back," the director told us. "Right now we have a chicken brooder in the coach . . . you see New Hampshire is hilly and poultry farming is one of the principal agricultural enterprises, so the people are in the market for new types of equipment for poultry farms.

"We have been making a series of trips to rural districts where we display equipment during the day, and put on demonstrations at grange meetings held in the evening," Miss Lerschen told us.

"Of course the coach kitchen isn't large enough for us to take care of a big audience, so we usually confine our electric cookery demonstrations to roaster cooking meals."

The program at a grange meeting, Miss Lerschen stated, is arranged so that each feature, over and above the community's discussion period, must fit into a definite time space and must teach farmers something.

"Our salesman will be allowed 45 minutes in which to discuss the farm equipment displayed in the coach, then the home service worker will be alloted 20 or 30 minutes; and she has to plan her demonstration so that it will take just that much time."

Equipment in the display coach kitchen consists of an electric refrigerator, a water heater, dishwasher, and smaller electric appliances.

"We have only appliances that meet the buying needs of the locality," Miss Lerschen said when she explained that the electric range was not used because people in this New England district aren't interested in buying this appliance yet.

Right now the Public Service Co.'s home service department, consisting of 16 members, is working on a six-week range promotion in Manchester, the director told us. It consists of a series of 12 cooking schools for range prospects.

"We charge 15 cents per person on attendance at the schools because we found that we get more prospects actually interested in buying, at our demonstrations, than we did when we used to have free schools and mobs of women would come just to be entertained.

"Our auditorium is small, it seats about 300 persons, but we usually have good crowds for our cooking demonstrations," she added. "When the series of 12 schools is completed, we are going to give a range free, and the women who attend one of the demonstrations have chances on the range.

"In addition to this, we give a $5 grocery order as a prize at each cooking school. This promotes good public relations with the merchants here, and is a popular feature with women prospects."

Joslyn Sales Contest Ends in a Fight

DENVER—The last sales contest held by Joslyn Dry Goods Co., local Norge distributor, ended in a fight—but the fight was all a part of the plans.

All of the store's salesmen were given a $1.00 volume quota. At the end of the quota period, a "smoker" was staged. Tickets to this affair were sold to store employes for 10 cents each.

All contestants were then informed that the two salesmen with the lowest record when the contest ended would be invited, forcibly if necesary, to stage a three-round boxing match at the smoker. The money collected from ticket sales was to go to the winner of the bout.

The fight itself, however, was somewhat of a frame-up, for after two rounds of battling, the two boxers suddenly changed their tactics in the third round and started devoting their attention (as well as their punches) to the referee. The referee, not to be outdone, retaliated by calling the fight a draw, and splitting the purse.

New England Grunow Dealers Sell 800 Radios in 'Bill Grunow Day' Tribute

HARTFORD, Conn.—Shipment of more than 800 radio sets to Grunow dealers throughout the New England states climaxed the "Bill Grunow Day" promotion featured recently by Stern & Co., Grunow distributor with headquarters in Hartford.

Devised as a tribute to William C. Grunow, president of General Household Utilities Co., manufacturer of Grunow radios and refrigerators, the one-day drive had as its aim to secure an order for at least one radio set from each of the 400 dealers operating under Stern & Co.

To enlist the cooperation of the dealers, awards ranging from a pencil to a share of stock in the General Household Utilities Co. were offered by Francis E. Stern, president of the distributorship.

Dealers who purchased the quota required to qualify them as winners of stock certificates were termed honor dealers. A scroll bearing their names and photographs will be presented to Mr. Grunow.

The promotion was swung into action in this manner: a night letter sent to each of the dealers urged him thoroughly to inspect the important message which he would receive in the morning. Through a special arrangement with a telegraph company, messenger boys delivered the promotional material on the event to each dealer the following morning.

Dealer orders were wired in on the campaign day, and confirmation orders mailed in later. Close check on dealer answers were made throughout the day, and Stern & Co. salesmen contracted by telephone those dealers who were slow in sending orders.

When orders taken in during the campaign had been sent into the General Household Utilities Co., Stern & Co. received in return a wire requesting sufficient copies of the promotion material, prepared for the drive, to supply each Grunow distributor in the United States with a copy.

IN the sale of a Bonderized refrigerator you not only provide your customer with an outstanding gift, but the recipient will enjoy it for many more holidays than one that may be less carefully finished.

PARKER RUST-PROOF COMPANY
2197 E. Milwaukee Ave. • Detroit, Michigan

A book showing why Bonderizing gives refrigerator finish greater permanence and prevents rust, is available to interested manufacturers and dealers.

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Curve Still Rises

SPEAKING before editors of more than 75 publications at the Waldorf-Astoria hotel in New York City last Friday, A. E. Allen, Westinghouse vice president in charge of all appliance merchandising, confidently predicted that the fine gains registered in every item among electrical appliances for the kitchen in 1936 would be "just a beginning" compared to sales figures expected in 1937 and the years immediately following.

Refrigerators, ranges, and other kitchen appliances all had record years in 1936, but Mr. Allen declared that Westinghouse is betting on the expectation that the sales curve will continue to rise on these products in 1937 with increased appropriations for advertising and promotion, and by capital investments in added plant and warehouse facilities.

Leonard Executives Make Same Prediction

A week previously, Leonard distributors heard President George W. Mason, Vice President Henry Burritt, and Salesmanager R. I. Petrie make substantially the same statements and predictions.

Executives like Mason and Allen are no more addicted to making wild statements than they are to gambling on a long shot. When they state that the phenomenal sale of more than 2,000,000 household electric refrigerators in 1936 will be bettered by the 1937 record, they must have competent market information on which to base their judgments and their prognostications.

Now comes the ever-reliable firm of Dun & Bradstreet, Inc., with an exceedingly optimistic statement on the future of electrical appliances. "Going ahead at a faster rate than many other industries," the statement declares, "the electrical supply trade at the close of the third year of constant progress is confronted with a rapidly widening use for its products as 1937 is entered.

"In spite of the new peaks established during 1936 by sales of refrigerators, ironers, washers, and electric output, their extension next year is foreseen. Plans for new building work have been set to a higher objective, rural electrification is expected to make more headway, and industrial requirements will be more numerous as operating rates expand.

"Wholesale distribution for the first 10 months of 1936 was at a six-year high, having advanced 30 to 55% from the corresponding 1935 showing. Conservative estimates now place wholesale sales for the entire year at 40% more than in 1935, when the Bureau of Foreign and Domestic Commerce reported $16,287,000,000. This would lift the 1936 total to $22,801,000,000 for the wholesale distribution of electrical goods, including electrical appliances, radios, and refrigerators. It would mark the third successive annual increase, after four years of decline."

Expansion Programs Planned by Utilities

Utilities have prepared expansion programs for 1937, several major systems planning to spend 30 to 100% more than this year, when around $300,000,000 was expended. Prices, which started to rise in September, have prevented the margin of profit from being commensurate with the rise in sales, and have hampered manufacturers in setting quotations on first quarter deliveries. Collections have been good. These were some of the major developments revealed by a survey of the electrical supply trade, which has just been completed by Dun & Bradstreet, Inc.

In no year since 1929 have manufacturers been forced to jump their schedules by such wide margins from month to month. In spite of the increased operations, a tight delivery situation has obtained all year, and has been particularly aggravated since early fall. With manufacturers of certain types of controls for air conditioning, radios, refrigerators, switches, and panel boards reporting gains of 100% and more, total production for the 10 months of 1936 was up 40 to 60% from 1935.

Output of electric motors at some centers already has gone ahead of the peak year of 1929, and the improvement in electric wiring and lighting fixtures has kept pace with that in the building industry. Industrial supplies and equipment of all types contributed heavily to the enlarged orders, and some manufacturers enlarged plant facilities, in order to meet shipping schedules. In stoves, ironers, and refrigerators new production peaks were set.

Electrical Contractors Shy at Long Contracts

Electrical contractors increased volume about 100%, with some, in exceptional position to take advantage of the items, expanding operations as much as 300%. This work was largely for distilleries, industrial concerns, and public projects. Outlook for 1937 was termed bright, but there was some hesitancy to accept long-term contracts, owing to advancing prices and possibility of labor difficulties, as skilled workmen are scarce.

Distribution of wholesalers of electrical supplies and appliances has forged ahead so rapidly since spring that volume for the 10 months of the current year ranged from 30 to 55% more than in 1935. When the fall buying season was at its height, gains ran as high as 75%. Refrigerators, washing machines, stoves, toasters, grills, and other labor-saving devices were among the leaders. Retailers show increases almost as large as those of wholesalers, with the better grade goods in strong demand.

Household electric refrigerators sold by manufacturers to distributing outlets for the first 10 months of 1936 rose to 2,003,700 units, marking the first time in the history of the industry that the 2,000,000-unit mark had been attained, according to estimates made by AIR CONDITIONING AND REFRIGERATION NEWS. Passing the corresponding 1935 figures by 26.6%, this represented an increase of 16.5% over the total 1935 sales of 1,719,369 units.

Washer and Ironer Sales Reach New High

New highs also were touched by sales of washers and ironers. For the 10 months of 1936 washer sales were placed by the American Washing Machine Manufacturers' Association at 1,532,914 units, a rise of 23.45% from the previous year's, and 8.4% larger than the total for 1935 of 1,413,761. The 153,807 ironers sold topped the full 1935 record and were ahead of the 10 months of 1935 by 25%.

Multiplying uses of household appliances are revealed in the gain in electricity sold to ultimate consumers (domestic service). According to statistics compiled by the Edison Electric Institute, consumption in every month of 1936 was larger than that in the comparative one of any preceding year. For 26 consecutive months it has held above 1,000,000,000 kilowatt-hours.

Reaching an all-time monthly high at 1,466,000,000 in January, total for the 10 months of 1936 rose to 12,516,000,000 kilowatt-hours, a new record, as it exceeded the 1935 comparative of 11,520,000,000 by 10.6%, and was 20.5% and 28.6% larger than in 1934 and 1933, respectively. The 1932 domestic service figures were passed by 28.0% and 1929 by 61.6%.

Power Consumption Hits New Weekly Peak

After going above 2,000,000,000 kilowatt-hours for the first time in the history of the industry for the week ended Dec. 21, 1935, total electric output for the country again went over that level during the two final weeks of June, 1936. Since July 11, or for 23 successive weeks, the 2,000,000,000-mark has been exceeded, and on Dec. 12, went up to 2,278,303,000 kilowatt-hours, setting a new peak.

Petitions for reorganization under Section 77-B of the New Bankruptcy Act were filed by only two concerns in the electrical supply trade during the 11 months of 1936. One was a manufacturer at Newark, and the other a wholesaler at Pittsburgh. These two cases contrasted with six applications recorded in 1935 and one in 1934.

Failures also dropped abruptly during the 11-month period of 1936, going down to 59 from 77 for the full year of 1935, to establish an all-time low, which compared with the record high of 279 for 1932. The defaulted indebtedness, on the other hand, made a less favorable showing, the total for the 11 months of 1936, rising to $1,122,399 from $910,637 for the 12 months of 1935.

Good Time to Be in Appliance Business

This is a good time to be in the electrical appliance business. Products are at an advanced and fundamentally stabilized state, financing has been remarkably facilitated, purchasing power has been increased, and the cumulus of steady promotion throughout recent years has stimulated public demand for the electrical way of living to an unprecedented high point.

Now is the moment to cash in on a good name in the electrical appliance business—whether it be manufacturer, distributor, or dealer. It is no time for price-cutting or chiseling. And the jillopy product, like the fly-by-night merchandiser, has apparently Gone with the Wind of Depression.

Letters

For the Love of Mike Send It!

Charles E. Yost Advertising Agency
H. W. Oliver Bldg., Pittsburgh
Dec. 14, 1936.

Publisher:

My subscription to REFRIGERATION NEWS seems to have been discontinued. Hope we don't owe anything, but if we do send a bill and for the love of mike put me back on your subscription list and mail bill to the above address. The subscription should come to L. H. Neiplin, Charles E. Yost Advertising, 341 Oliver Bldg., Pittsburgh, Pa.

Will appreciate receiving all of the December numbers.

L. H. NEILPIN,
Associate, Charles E. Yost Advertising.

Is the Pony Express Running from Detroit?

United Refrigeration Co.
76 West 46th St.
Bayonne, N. J.
Dec. 9, 1936

Gentlemen:

I would like to know *if the government still has the pony express in Detroit*. When I first started to receive REFRIGERATION NEWS it was delivered in Friday's first mail, for the first few issues. Then it came in Friday's second mail, then Saturday's first mail, then for a while I received it Monday, first mail, and now I am receiving it in Monday's second mail.

By the time I get the paper the news is old and the goods that was for sale in the classified column has already been sold on two occasions.

The paper reaches me just six (6) days after being published. I have been receiving mail from Chicago which is over 200 miles further west than Detroit, in two (2) days, so it cannot be Mr. Farley's fault.

GEORGE R. HENDRICKSON

P. S. To really tell the truth, I like the NEWS so much that I can't wait until it comes.

Worst Drought in Years in Prospect for Australia

Dangar, Gedye & Co. Ltd.
Machinery & General Merchants
Malloch House, Young St., Sydney
Nov. 24, 1936

Editor:

We are in receipt of your communication of Oct. 15 from G. F. Taubeneck and are pleased to learn that Mr. Taubeneck has returned to active duty again after his long holiday.

Unfortunately, due to length of time taken in delivery of mail between U.S.A. and this country your communication was not received until a few days ago and we are very much afraid that we will not be able to help you with the Foreign Trade Number which you intend publishing on Dec. 2.

As you are probably aware, the mail service between The United States and this country has been disorganized due to your shipping strike, but we will endeavor to have this reach you as soon as possible by forwarding per air mail to England, although from past experience we find that this procedure hardly warrants the expense as the normal mail service is, if anything, quicker than this air mail route.

In respect to resume of our activities in the refrigeration field this season, sales have been up to last year's peak, although due to weather conditions existing throughout the Continent at the present time we think there may be a considerable falling off after the Christmas period is over.

While some parts of our State have been rather fortunate in having sufficient rain for agricultural requirements the greater part of the Continent is experiencing the worst drought in years. Only last week our sales representative who covers the greater portion of the Northern and North Western part of the State reported that it was useless for him to visit the North Coast until they had had some rain in this district.

A large Hydro-Electric Scheme situated at Nymboida some 500 miles from Sydney and about 200 miles from Brisbane has been running on restricted service, power only being available for a short period in the morning and not again until five o'clock in the afternoon and then only up to 9 pm., this being in an endeavor to conserve what water was left in the dam above the power station. If no rain is received in this district during the next week it is anticipated that this service will close down entirely. The area served by this Scheme is very large covering a stretch of country about 400 miles by 100 miles.

While wheat prices have been the highest for years—due no doubt to the influence of the American drought—crops have been restricted due to dry conditions over most of the wheat areas.

In regard to the other large source of income, i.e. the wool industry, the prices here have been up slightly on last year's prices, but due to government restrictions of imports from Japan this country is not buying and there is no doubt that if their buyers had been operating during this present selling season a big increase in prices would have been obtained.

Referring again to refrigeration, as you are probably aware, in May of this year our government saw fit to put prohibitive restrictions on imports of refrigerators, washing machines and partial restrictions on motor cars, etc.; in fact, most American products were placed at a great disadvantage.

In regard to refrigeration imports, only such parts as cannot be economically manufactured in this country or in Great Britain are allowed to be imported, this holding good even for replacement parts for machines in service.

While we ourselves are not yet feeling these restrictions to any large extent due to facilities for assembling and manufacturing of Kelvinator equipment in this country, a number of the other importers of complete machines have been very hard hit; in fact it is anticipated that some of these lines will go off the market entirely. Local manufacturers are, of course, making headway under this embargo.

In respect to potential business for the season to come, it is the writer's opinion here that commercial sales will still be by far the largest volume of turnover, but domestic sales must increase in number. Some three or four years ago we were in the position of selling almost an equal number of commercial machines to domestic machines; gradually this position has reversed and it is anticipated that before the season finishes our domestic sales will reach 700 and commercial in the vicinity of 300.

English manufacturers of component parts appear to be obtaining a considerable amount of some of the business which originally was in the hands of American suppliers and for the rest local manufacturers are attempting to step into the breach.

In respect to your query as to what service troubles are being experienced, you are, of course, aware of the territories which distributors have to cover in this as in any other country where close settlement saturation point is not comparable with the United States and where service has to be carried out from a central source great distances, even as far as 500 miles.

Our biggest trouble of late years has come from compressor seals. This we consider a very vital part of the refrigerator, and for our own part would like to see manufacturers revert back to the old type of seal in use some six or seven years ago, despite the fact that this would mean returning to compressors which were somewhat more costly to run due to higher motor wattages than the present day models.

We think that thermostatic expansion valves can be improved to make this part more reliable, as we are unable to return defective parts to the factory without a considerable amount of trouble due to customs declarations, import duty on repair costs, etc. making the cost of replacement valves to the customers almost prohibitive and maintenance for such jobs high when compared with the old flooded type of system.

E. EBELING,
Service Manager,
Electrical Refrigeration Dept.

270 Frigidaires Sold in Bombay Territory

The Bombay Garage
Proprietors: F. M. Chinoy & Co., Ltd.
Frigidaire Air Conditioning
Bombay

Mr. Taubeneck:

Glad to hear from you and learn that you remember our part of the world pleasantly.

The following is the news since your departure. The chairman of our company was Knighted in His Majesty's Birth Day Honor list. I enclose a photograph of Sir Rahimtoola Chinoy should you be interested in same.

The total orders for Frigidaires booked for the eleven months of this year are 270 and while this figure is not a very large one, I have every reason to believe that it represents the largest sale of any make of refrigerator in our territory.

There are no new Government restrictions or taxes imposed on refrigerators or air conditioners.

Service troubles experienced by us are not such that call for special attention.

This letter will not reach you in time for your issue dated Dec. 2, but nevertheless I am forwarding same in case you might be publishing a special issue at a later date.

We were glad to have had the opportunity of extending you our hospitality during the short time you were here. HABIB N. CHINOY

Sam Hall Is 1936 Westinghouse 'Rancher'

MANSFIELD—Officers of the Westinghouse Distributors' Quota Buster Club for 1937 received the ten-gallon hats and bandanas symbolic of their outstanding sales records during this year at the company's recent distributor convention here.

Selection of club officers is made on the basis of percentage of quota exceeded during the year.

"Rancher," or top distributor of the Westinghouse organization is Sam L. Hall, of Electric Supplies Distributing Co., San Diego, Cal. Mr. Hall is also Ranch Foreman of the "Class C" group.

Other "foremen" are: H. M. Moock, Moock Electric Supply Co., Canton, Ohio, Class A; and Tom Mason, J. W. Greene Co., Toledo, Class B.

Ranch "wranglers" are: A. Goldenberg, American Sales Co., Columbus, Class A; W. Austin Emerson, Westinghouse Electric Supply Co., Greenville, S. C., Class B; and Leo Rayhill, Kempf Brothers, Utica, N. Y., Class C.

Ranch "ropers" include Roy L. Brown, Westinghouse Electric Supply Co., Indianapolis, Class A; R. K. Van Zandt, R. K. Van Zandt Supply Co., Huntington, W. Va., Class B; and William S. Schlipf, City Service Oil Co., Bristol, Va., Class C.

Dealer Supervisor Contest Winners

Winners in the dealer supervisor's contest, conducted by Westinghouse from July 15 to Nov. 15, also were announced during the convention. Three highest men in the contest, who were awarded watches, were: Gene Cramer, Electric Supplies Distributing Co., San Diego; W. Rothfuss, Electric Equipment Corp., Newark; and E. P. Mercer, American Sales Co., Columbus.

Salesmen who won championship belts were: F. S. Howard, Wesco, Indianapolis; F. J. Foley, Wesco, Philadelphia; E. C. Brauning and Ted Goldenberg, American Sales Co., Columbus; O. H. Smith, Wesco, Los Angeles; J. A. Burrell, Moock Electric Supply Co., Canton, Ohio; N. K. Fuller, Connecticut Electric, New Haven; C. Billy Lane, Wesco, Los Angeles; Eric Hall, Wesco, Seattle; Don Colvin, Colvin-Templeton, Los Angeles; J. W. Barren, Wetmore-Savage, Providence; George Teutenberg, Times Appliance, New York City; R. V. Matthews, Wesco, Philadelphia; W. W. Bell, Wesco, Los Angeles; J. A. Collier, Electric Equipment, Newark; R. T. Terry, Danforth, Pittsburgh; G. F. Spangler, Wesco, Philadelphia.

Trip-Winning Salesmen Named

Trip-winning salesmen, in addition to those named above, were: Glen Kieth, Columbian Electric Co., Kansas City; H. Robie, Danforth Co., Cleveland; W. Rooney, Wetmore-Savage, Boston; C. E. Meyers, Moock Electric Co., Canton; S. N. Smart, Edgar Morris Sales Co., Washington, D. C.; Stanley Searle, Wesco, Los Angeles; J. F. Bacon, Iron City Electric Co., Pittsburgh; R. M. Cockran, Moock Electric, Canton; Dave Reiss, H. E. Saviers & Son, Reno, Nev.

A free sample of SHELF-X will show you why . . .

MODERN REFRIGERATOR BUYERS DEMAND SHELF-X SHELVING

● Knowing the advantages and convenience of Shelf-X*, modern buyers insist on this up-to-date refrigerator shelving.

Shelf-X provides a firm, flat surface shelf upon which containers can be moved freely without tipping. It supports small objects; does not permit them to drop through. Shelf-X is attractive, too. Its diamond design adds to the appearance of the refrigerator.

Excellent for air-conditioning units

Because it has a large open area that assures free circulation of air, Shelf-X is as good for air-conditioning screening as it is for refrigerator shelving.

Write for free sample of Shelf-X and complete details. Address Dept. 21-ER.

MANUFACTURED BY *Registered Trade-mark

USS UNITED STATES GYPSUM COMPANY
STEEL PRODUCTS DIVISION, 300 W. ADAMS ST. CHICAGO

McGraw Medal for Cooperation Goes To R. E. Fisher

SAN FRANCISCO — Robert Earl Fisher, vice president of Pacific Gas & Electric Co., was awarded the James H. McGraw Medal for Cooperation for 1936 at a dinner on Dec. 11 in the Fairmount hotel, sponsored by the San Francisco Electrical Development League.

This year's award was voted to Mr. Fisher in recognition of his constructive contribution to the advancement of cooperation in the electrical industry through his leadership in coordinating and promoting the development of the electrical market in northern California.

The committee of judges which awarded the bronze medal and the purse of $100 to Mr. Fisher consisted of Allan Coggeshall, president of Hatzel & Buehler; T. O. Kennedy, executive vice president of Ohio Public Service Co.; L. E. Latham, vice president of E. B. Latham & Co.; and C. E. Wilson, vice president of General Electric Co.

In citing Mr. Fisher for this year's award, the committee calls attention to his long record of leadership in cooperation among electrical men in California. Back in 1922, the citation reads, when competitive conditions were demoralizing the industry, he succeeded in establishing a "gentleman's agreement" defining the status of all branches of the industry, in a constructive program for mutual progress.

For the three following years, he headed the Pacific Coast Electrical Bureau. He helped establish and was president of the Electrical Development League of San Francisco, and worked for cooperation through the Pacific Coast Electrical Association, of which he has been president and earlier chairman of the Commercial and then the Public Relations sections.

In 1933, Mr. Fisher organized the Electric Appliance Society of Northern California. Through this association, he has coordinated the advertising and promotion of manufacturers, wholesalers, dealers, and utilities, and increased its volume and effectiveness.

Ice Palace to Be Feature of 1937 Paris Exposition

PARIS, France—To house exhibits portraying the development of domestic refrigeration equipment during the past 60 years, an International Ice Palace will be a prominent feature at the Paris exposition to be held in 1937.

Situated on the Seine bank between the Alexander III and Alma bridges, the Palace will be two stories high. The building will be devoted exclusively to domestic refrigeration and its applications. Ripe fruits, kept fresh for six months by mechanical freezing, will be offered to the public as part of one display.

Above the roof of the Ice Palace will project a 150-ft. tower which will be covered with ice during the summer months, and will erupt snow storms in miniature at intervals. It will be illuminated at night by means of a new process involving gases obtained by cooling methods.

Among the significant events which will be commemorated in connection with France's early entrance into the refrigeration field, is that in 1876 Charles Tellier, a French merchant, used a new ice system which he called Le Frigorique, to preserve a cargo of meat shipped from France to Buenos Aires.

Thirty years later an association was formed by French scientists called the "Association du Froid" for the development and popularization of cooling devices.

Refrigeration was given prominence also at the French Colonial Exposition held a few years ago.

R. C. Padgett Appointed G-E Range Staff Sales Specialist

CLEVELAND—Appointment of R. C. Padgett as range sales specialist to the range division staff of General Electric Co. has been announced by J. R. Poteat, division manager.

Mr. Padgett enrolled in the student course at Westinghouse Electric Co., and later served that company as range specialist at Mansfield and Buffalo. In 1929 he became connected with Associated Gas & Electric Co. as range and water heater specialist. Later he was assistant merchandise manager at the company's properties in Oneonta and Geneva, N. Y. In 1932 he became district business manager at Walten, N. Y., and later was transferred to Ohio Midland Light & Power Co. at Canal Winchester, Ohio, as business manager.

In his new position, Mr. Padgett will contact the territories and promote range business.

2 Additions Made To Owens-Illinois Insulation Staff

TOLEDO—Two additions to the Fiberglass insulation materials staff of Owens-Illinois Glass Co. were announced last week by William C. Davis, director of merchandising for the company's industrial materials division.

D. H. Corlette, for many years associated with the Wood Conversion Co., maker of Balsam Wool insulation, has joined the division's sales staff, with specific activities in connection with refrigeration insulation.

Charles M. Lee, sales engineer, whose 10 years in the refrigeration and insulation industry includes association with Wood Conversion Co. and more recently with Cromwell Paper Co., Chicago, has also been added to the division's staff.

In his new work Mr. Lee will contact refrigeration cabinet manufacturers, and will devote much time to assisting in the development and improvement of Owens-Illinois' fibrous glass insulation material. He will be in the refrigeration and stove insulation sales group.

Swartz Heads Office For Anchor Lite

PITTSBURGH — Appointment of Harry M. Swartz as office manager of Anchor Lite Appliance Co., Crosley distributor in this territory, was announced last week by Harold W. Goldstein, president of the company.

Mr. Swartz has been associated with refrigeration and radio business in this area for about 20 years, having been at one time treasurer of the Esenbe Co., Atwater-Kent distributor.

Vernon Hussey Achieves First Chieftain Rating In Nashville Area

KINGSPORT, Tenn. — Capitalizing on Norge Corp.'s all-products program, Vernon H. Hussey of Atkins Hardware Co. here, became the first Viking in the territory of Tennessee Valley Appliance, Inc., Nashville Norge distributor, to make application for his Chieftain Award this year.

Mr. Hussey's record through July 31, 1936, follows: 67 refrigerators, four ranges, 13 washers, three ironers, 13 water coolers, and two commercial units.

Ament Joins Baltimore G-E Supply Corp.

BALTIMORE—Edward W. Ament, for the past few years associated with Parks & Hull Appliance Corp., former Westinghouse distributor in this territory, has joined the sales department of General Electric Supply Corp., General Electric distributor, as appliance specialist for metropolitan Baltimore.

Prior to his association with Parks & Hull, Mr. Ament was for three years manager of the Baltimore branch of Southern Wholesalers, Inc., former Kelvinator distributor and now Leonard representative in this territory.

EH&FA to Finance Sales Of TVA Cooperative

BROWNSVILLE, Tenn. — Electric Home & Farm Authority has completed a contract extending its financing plan on electrical appliances to Southwest Tennessee Electric Membership Corp., a local rural electrification cooperative purchasing power from Tennessee Valley Authority.

Three New Promotion Pieces Issued by Kitchen Bureau

NEW YORK CITY—Three new promotion pieces on the advantages of the all-electric kitchen have been made available by National Kitchen Modernizing Bureau to utility companies, electrical bureaus, and other cooperative organization. They include two folders and a 16-page booklet.

One folder is entitled, "An Electric Kitchen Is a Happy Kitchen." On the inside pages are shown two views of up-to-the-minute kitchens, bright, cheery, efficient. Copy describes the ease with which the modern housewife may obtain such a kitchen, suggesting that if she cannot afford to modernize all at once, that she should buy the most needed appliance now—the rest later.

"For a Healthy Family—A Wholesome Kitchen," reads the title of the other folder, and the cover bears the portrait of a smiling baby. Inside pages show a diagram of a modern planned kitchen contrasted to one of the 'obsolete' type. Descriptive copy declares that "you would never contend with an obsolete kitchen if footsteps were dollars," and explains that "kitchen efficiency comes not alone from modern, electric labor-saving equipment, proper cabinets and work counters, but also from their planned arrangement in your kitchen."

Both folders suggest that "it costs you nothing to have a kitchen planning specialist look at your kitchen and advise you—just let us know when to call."

The 16-page booklet goes into detail in this matter of kitchen planning and modernization, describing each kitchen convenience and its proper application.

Delco motors

Another Christmas . . . and, in many a home, a happy housewife will find a new refrigerator, washer or ironer. Thousands of these Christmas gift appliances will be Delco-powered, for more and more buyers are learning that *Delco*-powered appliances are more quiet and dependable in performance. Delco quality, rigidly maintained throughout years of manufacturing, accounts for this preference—not only on the part of retail buyers, but also among appliance manufacturers and dealers.

DELCO PRODUCTS
Division of General Motors Corporation
Dayton, Ohio
In Canada: McKinnon Industries, Ltd., St. Catharines, Ont.

Commercial Refrigeration

York Installs Air Conditioning to Meet Exacting Requirements of Boston Brewer's Fermentation Room

BOSTON—Boston Beer Co., brewers of "Boston Beer" since 1828, recently equipped their large fermentation room with an air-conditioning system that was literally custom built.

The equipment was installed by York Ice Machinery Corp.'s Boston branch according to designs and specifications developed by Schwarz Laboratories, Inc., consulting engineers.

This installation serves a three-fold purpose. Primarily it keeps the room at a uniform temperature of 40° F. so that fermentation will proceed exactly according to schedule.

It also introduces a constant supply of fresh air to displace the carbon dioxide gas liberated by the fermentation. In addition to this, it eliminates dropping of frost from exposed pipe coils employed in the former cooling system.

Consisting principally of four York FB-2000 industrial air-conditioning coils, a fan of 12,600-cu. ft. per minute capacity, cleaning filters, and automatic controls, the conditioner is contained in a sheet steel housing located near the ceiling at one end of the room.

Conditioned air is fed into two long ceiling ducts which extend down either side of the room. These ducts are fitted at intervals with slotted openings, each with adjustable deflectors to distribute the conditioned air.

This arrangement lays a blanket of cold air at the top of the room, and forces out carbon dioxide gas through louvers in the side of the room.

All air which passes through the conditioner is thoroughly filtered.

Wherever the ducts pass over the fermenting tanks, they are insulated with cork to prevent "sweating" and dripping into the wort.

Refrigeration for the air-conditioning system is provided by an ammonia system of slow-speed horizontal compressors used before Prohibition. Refrigerated brine is pumped from brine coolers through the air-conditioning coils.

Room temperature is automatically regulated by means of a Fulton sylphon brine regulating valve, suspended from the main air duct. This valve simply regulates the amount of brine admitted to the cooling coils.

The fresh air intake is regulated by a hand-controlled damper.

For winter operation, there is a small heater in the fresh air inlet, which is equipped with an automatic steam regulating valve. This heater is designed to warm incoming air to the proper degree whenever the outside temperature falls below the established room temperature of 40° F.

G-E Designs New Pullman Electric Water Coolers

SCHENECTADY — Several new types of electric drinking-water coolers for use on Pullman Cars have been introduced by General Electric Co., and have been installed on the Union Pacific, Chicago, Milawukee, St. Paul & Pacific, and other railroads.

Designed to overcome disadvantages of ice-cooled units, these new coolers operate with maximum sanitation and minimum expense. A chromium plated housing over the faucet protects this outlet from contamination, and foot-pedal operation eliminates the necessity of using both hands.

Freon-12 is used as refrigerant, and water temperature is controlled by an automatic thermostat. Coolers are available either as self-contained units or as separate cooling and refrigerant condensing units for remote installations in the car.

Dairy Firm Trucks Use Kold-Hold Units

EATON RAPIDS, Mich. — Four streamlined ice cream bodies have been purchased by Miller's Dairy Farms here from Kalamazoo Special Auto Body Co., Inc. Two of the units are 1,200-gal. capacity semi-trailers, and the other two are 700-gal. capacity trucks of cab-over-engine design.

The bodies are designed to maintain temperatures from zero to 5° F. Insulation consists of 7 inches of Dry-Zero Sealpad and Blanket in roofs and sides, while cork is used in the floors. Kold-Hold units provide refrigeration.

All four units are powered with Chevrolet motors, and have several large doors to facilitate loading.

Davis Commercial Sales Up 35% in Baltimore Area

BALTIMORE—Sales of F. A. Davis & Sons, Inc., distributor of Frigidaire commercial refrigeration equipment in this territory, show an increase of 35% over those recorded at this time last year.

Most of this business has been in ¾-hp. compressors, though some 3-hp. jobs have been sold. One of the 3-hp. units was installed in the local Coca Cola plant. Most of the installations have been in soda fountains and other establishments requiring electric refrigeration for food preservation and service.

Gygax, Chief Engineer For Curtis, on Long European Tour

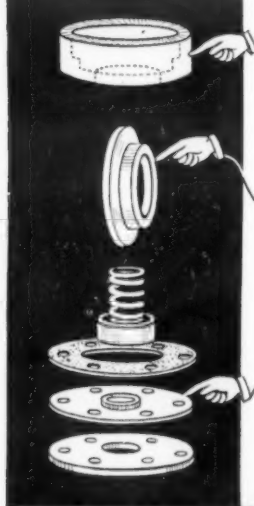
ST LOUIS, Mo.—Ernest Gygax, chief engineer of the Curtis Refrigerating Machine Co., left the factory here early this fall to make an extended tour through European countries where he is visiting Curtis representatives and agencies.

Mr. Gygax's itinerary includes stops in England, Holland, Belgium, France, Switzerland, Czechoslovakia, and Germany.

McCray Appoints Three New Distributors

KENDALLVILLE, Ind.—New distributor appointments by McCray Refrigerator Co. here include Price Bros., Montgomery, Ala.; John Q. Barnes, Amarillo, Tex.; and Lester Everts, Syracuse, N. Y.

Here's Why the AERO SELF-ALIGNING SEALS are the Best!



POSITIVE SEAL! *This step in the seal cup** makes the "Aeropack" (DUPRENE) synthetic rubber gland ring form a gas-tight lock around the compressor shaft

NO "RUN IN" NECESSARY!! *The concave face in the seal** makes the "Aerolyte" bronze bushing seat and seal immediately. The longer the wear the better the seal

SELF-ALIGNING !!! *The copper diaphragm bushing plate** that holds the "Aerolyte" bronze bushing is fundamentally a new self-aligning principle in compression seals

EVERY SEAL GUARANTEED

* THESE FEATURES ARE ALL COVERED UNDER U.S. PATENT GRANTED OCT. 1, 1936 AND OTHER PATENTS APP. FOR

AERO PRODUCTS CORPORATION
36-08-34th St., Long Island City, New York

Compactness, Easy Setting Claimed For New Control

(Concluded from Page 1, Column 2)

models. The bimetal motor overload protector is available on all models.

Other features claimed for the new control include:

1. Compact construction, pressed steel case with close fitting, clamp-type cover.
2. Sufficient thumb and screw driver room for making electrical connections.
3. Elimination of all internal wiring and pigtails.
4. Quick, convenient adjustment outside the case (may be locked at desired setting) that does not invite tinkering by uninformed users.
5. Contacts replaceable in the field as a unit, in the event of contact damage because of abnormal conditions, without removing control or pumping down system.

The type 213 Penn temperature control is a single pole, single throw temperature switch which closes high, opens low. Both range and differential are fully adjustable by means of slotted hex adjusting nuts on outside of the case. It is furnished in a choice of three standard temperature ranges and two ranges of differential adjustment.

Type 217 dual temperature control is a single pole, single throw control which regulates compressor operation by temperature and provides safety shutdown at excessively high pressures in the high side, due to any cause. Standard pressure connection to the high side is ¼-inch S.A.E. flared tube connector. Excessive pressure actuates toggle mechanism which snaps contacts open. Contacts close on drop in pressure to normal operating range. Available with same charged temperature elements as type 213 and includes same outside range and differential adjusters.

Type 203 low side pressure control consists of a single pole, single throw low side pressure control which closes high, opens low. It has copper bellows with ¼-inch S.A.E. flared tube connector. Standard bellows 1⅛ inch in diameter provides minimum differential of 4½ lbs. Optional 1½-inch bellows for 2½ lbs. minimum differential, or 2-inch bellows for 1 lb. minimum differential.

Type 207 dual pressure control is a single pole, single throw dual pressure control which regulates compressor operation by low side pressure (closes high, opens low) and provides safety shutdown at excessively high pressures in the high side. Low side control functions same as on type 203. High pressure safety cutout is same as for dual temperature control.

Bettar Refrigerated Truck Takes Power Off Transmission

BALTIMORE — Bettar Ice Cream Co. here has placed in service a power and refrigerating truck of 1,200 gal. capacity to carry its products to towns in the Eastern Shore district.

The Eastern Shore Express, as it is called, will have its headquarters at Love Point, Md., where a hardening and storage warehouse having capacity of 2,500 gals. of ice cream will be established.

The Bettar power and refrigerating plant on wheels has its own generating unit. A 2-hp. Brunner compressor is mounted at the bottom of the "plant" or truck; inside are five Kold-Hold units.

To conserve power and the refrigerating current, the compressor is so arranged that one valve may be disconnected, if desired, and only half of the plant will be served. The power is taken off the transmission and runs on both alternating and direct current.

When the truck is in operation, it uses direct current off the transmission; when not running, alternating current of the garage or plant where it is parked or stored is used.

The eight-ton truck has a special body built by Hackney Bros. Co.

6 Star Salesmen Reach $10,800 Mark in Month

BIRMINGHAM, Ala.—Sales by six leading commercial refrigeration salesmen of Alabama Power Co. during the month of October totaled approximately $10,800.

Leading salesman, in dollar volume, was L. E. Wheyland of the Mobile district, with sales totaling $3,241.50 during the month. G. E. Bagwell, Jr., of the Montgomery district was second, with sales of $2,575.50, and F. C. Brigham of the Anniston district third, with $2,125.25.

Other leaders during the month were J. F. Wakefield of the Huntsville district, with $1,872; C. B. Cosby of the Birmingham district, with $814.50; and C. W. Millican, Jr., of the Selma district, with $170.

Hunker Adapts G-E Beverage Coolers For Use in Refrigerating Ice Caps & Collars in New York Hospitals

NEW YORK CITY—The idea of beverage coolers as refrigerating units for storing ice caps used in hospitals, and the creation of a new field for this type of equipment, is the recent sales accomplishment of Paul Hunker, commercial manager of Rex Cole, Inc., General Electric distributor here.

Hospitals have had as one of their chief difficulties the problem of keeping an adequate supply of ice caps for patients' use. Nurses had to leave their regular duties to chop ice for the bags—a difficult task, because the ice had to be broken into small pieces to fit into the narrow-necked bottles.

With a beverage cooler converted to hospital use, ice caps containing a special alcohol solution—10% in caps and 5% in collars—can now be placed in the cooler and within one and one half hours frozen to a slush consistency which retains its chilling properties approximately one and a half to two hours.

Several of the freezers were placed in hospitals in metropolitan New York, and tested under actual working conditions with gratifying results, according to Mr. Hunker.

Painted white, the coolers match other hospital equipment. They supply the hospital with enough ice caps to last for 24 hours, since a dozen caps, collars, and bags can be frozen in about two hours. Added feature of the plan, is that the caps can be returned to the freezer for re-cooling, and therefore used repeatedly without changing the solution.

G-E All-Electric Milk House Promotes Rural Electrification in New Hampshire

CONCORD, N. H.—Transformation of a General Electric Kitchen Coach into an all-electric milk house on wheels is the latest rural electrification promotion of New Hampshire's Public Service Co.

This idea of presenting the advantages of electricity on the farm in the same way that G-E presented the all-electric kitchen was fostered by Joseph H. Bodwell, the utility's rural agent.

The traveling dairy display contains all the equipment necessary for complete milk house operation—an electric aerator, coolers, bottle washer, water heater, sterilizers, water pumps, room heater, ventilating, and even an electric fly trap.

The extension service department of the University of New Hampshire, under the direction of J. C. Kendall, cooperated in designing and equipping the milk house.

The portable milk house made its debut at the Agricultural Engineering headquarters of the university. The showing was attended by school officials as well as representatives from the state department of agriculture and the New Hampshire Farm Bureau.

Following this initial inspection, the trailer was thrown open to the public, remaining at Agricultural Engineering headquarters for a Farmer's Week program.

Rural Agent Bodwell is now superintending the trailer's tour of county fairs and other special farm programs throughout the state.

Fan System Lessens Fruit Decay

LOS ANGELES—Marino Bros., local produce company, has installed a blower system to protect its stores of fruit and vegetables from rotting.

The fan, circulating 3,000 c.f.m., is suspended from the ceiling by wires, and is placed at the head of an aisle which extends down the center of the warehouse. Air is blown against the wall and deflected back along either side of the building, thus assuring uniform circulation. Blowing against the produce, the circulated air evaporates excess moisture contained in the produce, and consequently prevents decay.

Operation cost of the fan does not exceed one cent per hour.

Truck Uses Butane for Refrigeration Fuel

LOS ANGELES—Butane is used both for refrigeration and for fuel in the new truck unit recently purchased by Pioneer Provision Co. for the route through California's Coachella and Imperial valleys where summer temperatures frequently rise above 120° F.

The truck body, built to carry between three and four tons of meat, weighs approximately 2,300 lbs. Interior dimensions are 126 in. by 78 in. by 60 in.

Three inches of Dry-Zero Blanket insulate the roof, sides, and ends of the body, and four inches of cork are used in the floor. The body was built by Welded Fabrication Co., here.

Kold-Hold, Dry Zero Equip 2 Trucks

PORTLAND, Ore.—Kold-Hold units and Dry-Zero insulation were used to equip the two refrigerated truck bodies recently constructed here by Wentworth & Irwin, Inc., for Arden Farms Co.

Utilization of all available space in these streamlined bodies results in a capacity 40% greater than that of conventional bodies of corresponding size, according to Roland S. Rose, chief engineer for the manufacturing company. Each truck will accommodate approximately 550 gal. of ice cream.

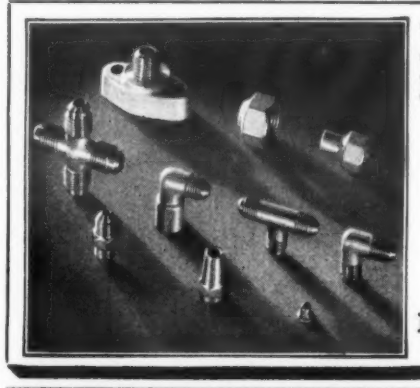
Three Kold-Hold units in each body furnish the refrigeration, and the bodies are insulated with 6 inches of Dry-Zero. Floors are insulated with 6 inches of cork set in bitumastic.

Fil-Pure to Distribute Betz Unit in South

ST. PETERSBURG, Fla.—Fil-Pure Co., recently organized local firm, has been appointed distributor in nine southeastern states for the Filterpure unit manufactured by Betz Corp., Hammond, Ind.

Fil-Pure was also recently appointed distributor in this territory for Vilter Mfg. Co.

In addition to these distributorships, the company is organized for the sale, service, and installation of domestic and commercial refrigeration and air conditioning equipment within a 100-mile radius of St. Petersburg.



PERFECTION
Refrigeration Fittings are Certified to Excel

Ask for catalog covering complete line of Fittings, Valves, and Compressor Parts

PERFECTION REFRIGERATION PARTS CO.
HARVEY, ILLINOIS

SALESMEN — ATTENTION

There will shortly be announced a new name in the commercial refrigeration industry. The introduction of a complete line of condensing units in sizes ranging from ¼ to 10 H.P. embodying many new features, that will make this line instantly popular. Priced competitively.

The manufacturer is interested in communicating with manufacturers' representatives now contacting dealers and distributors, selling non competing lines such as coils, valves, or other commercial appliances. A liberal commission plan that will make you money and increase your present earnings.

Address Box 882
Air Conditioning and Refrigeration News, Detroit

Responsibility for Judgment of Standards Shifting to Professional Agencies, Sales Executives Hear

(*Concluded from Page 1, Column 4*)
and manufacturing every five years. Years ending in "2" and "7" were chosen arbitrarily as the years for such census taking.

Among the other prominent speakers on the program were I. J. Fairchild, chief of the Division of Trade Standards of the National Bureau of Standards; P. O. Ferrel, vice president of the Real Silk Hosiery Mills; J. W. Darr, vice president of the Commercial Investment Trust Co.; Merrill B. Sands, vice president of the Dictaphone Corp.; Bernard Lichtenberg, president of Public Relations, Inc.; Senator Royal S. Copeland; Robert L. O'Brien, chairman of the United States Tariff Commission; Saunders Norvell, chairman of the board of Ingersoll & Norvell; and E. St. Elmo Lewis.

Mr. Moley declared that if business management recognizes the opportunity facing it today, "the future of this country can largely be what management wills it to be."

In the practical world, he stated, the confidence of the public can be gained only when the public knows that, in dealing with management it is dealing with agents "possessed of distinction, dignity, authority, and initiative, and not with mere puppets manipulated by unseen but all-powerful reapers of profits."

A management of the type Mr. Moley envisualized, "informed by broad understanding of the changes that are going on in the living world, cognizant of the great intellectual and emotional transformation that has gone on in the minds of the mass of the people in the last few years, will in the last analysis be a bulwark, and the most effective kind of a bulwark, against the attacks upon our institutions by destructive, unintelligent, crackpot innovators.

"Management's first job, therefore, is to establish in the public mind its sincere desire to serve the public well. It must identify itself with something more than the mere acquisition of profits. It must make the public recognize that it is something to be differentiated from mere ownership. It must acquire a local habitation and a name.

"When management has accomplished these things, its worst battle will have been won."

Praises Manufacturers' Group

The editor of *Today* praised the action taken by the National Association of Manufacturers in its recent meeting, which gave evidence of a "new spirit in the relations of business to the public."

With regard to the New Deal administration, of which he was at one time an important instigator, Mr. Moley averred:

"Business has come to recognize that it is better to suffer the occasional injustices of a liberal Administration in this country than to endanger the unity of the nation through an insistence upon a return to conditions that prevailed in the past.

"The spirit of business since the election has been manifested in the true American tradition. It is interesting to note that the most advanced and intelligent expression of this spirit has come from that part of business which is roughly labeled as 'management.'"

Specialty Selling Still Good

In a short talk Mr. Ferrel stated that Real Silk Hosiery Mills, which employs direct selling methods, exclusively, did a $12,000,000 business, and that final tabulation of the 1936 figures would show the highest sales total since 1929. Specialty selling was still the best route to high volume at a profit, he insisted, and used the example of his company's experience to prove the point.

Discussing the "Future of Instalment Selling," C.I.T.'s Mr. Darr averred that as sales declined, instalment business dropped off in proportion, and as sales went up, instalment business improved. The percentage nearly always hovers about the same mark —around 12% of all retail sales.

Losses on instalment sales through repossessions are constantly waning, he stated.

Senator Copeland averred that the cry for regulation of business came from the need to curb activities of the professional chiseler. It was his opinion, however, that if there were to be any regulation at all, it must be uniform in character; and that therefore he favored Federal standards of practice which could be adopted or readapted by the various states.

Shift of Responsibility

Lessening of the ability of the average consumer to judge by personal examination the quality of a given product, together with rising demands for quality merchandise and keener industrial competition, has placed responsibility for judgment of standards upon unbiased professional agencies, said I. J. Fairchild, chief of the Division of Trade Standards of the U. S. Bureau of Standards, in addressing the sales executives on "Future Responsibility for Quality."

"As little as three generations ago," said Mr. Fairchild, "many of our great grandfathers lived in households which were very nearly self-sufficient. They raised their own meat, vegetables, fruit, and eggs; made their own bread and butter; spun their own yarns; wore homemade clothes; and fashioned many of their tools at the home forge.

Backgrounds of Trade

With an acceleration which is astonishing in retrospect, there followed in successive stages, distribution of hand work to cottages, frequently referred to as the "cottage period"; then the factory period; later the machine age with mass production; and now modern chemistry has brought forth many amazing and mysterious synthetic products, Mr. Fairchild stated in discussing backgrounds of the present trade prospect.

"Looking back at this industrial evolution," he continued, "as individual effort has become more and more diversified and specialized, it seems natural that the individual ability to judge by personal examination the quality of a given product, should continue to decrease almost to the vanishing point.

"Today, what purchaser, professional or otherwise, can tell by appearance or feel what he can expect from one of our modern plastics? What temperatures it will stand? What strength? Abrasive resistance? Tendency to dissolve in acids? In alkalis? Other solvents? There are not less than 56 general brands of plastics made by at least a dozen fundamentally different processes with practically unlimited variations in physical and chemical properties.

"Which of us today," asked the Trade Standards head, "can tell by looking at the finished article whether a given job of chromium plating will stand up in service or what is the relative merit of two competing chromium plated articles?"

Day of Specifications

The World War seems to have been the milestone which marked an increasing demand for specific information about products; for specifications, classifications and definite assurances from seller to buyer regarding quality, he continued.

Since then our government has developed more than 1,100 federal specifications for the purchase of major items which it requires. Professional and technical organizations have standardized methods of testing, grading systems and classifications for many manufactured items.

The American Standards Association has approved not less than 335 standards representing a wide variety of subjects from screw threads to safety codes for the prevention of industrial diseases. Its files contain more than 14,000 foreign standard specifications indicating that several of the 26 standardizing bodies of other countries have been more active than our own.

"The widespread and intensive establishment of specifications and standards is rather conclusive evidence of the purchasers' demand for specific information, advance testing, and assurance of quality," declared Mr. Fairchild.

Growth of Cooperatives

"Having noted the consumer's decreasing ability to judge quality and the development of specifications for his protection, let us look at another manifestation of consumer unrest and dissatisfaction with existing methods of marketing and distribution, as evidenced by the growth of cooperatives.

"According to the latest figures which I have been able to obtain from the Farm Credit Administration and from the Department of Labor, there are now in the United States more than 12,500 cooperative organizations in the business of buying and selling goods for nearly 4,000,000 members, representing an annual reported business close to two billion dollars.

"Some observers will say," Mr. Fairchild stated, "that the chief incentive in this cooperative activity is price, but very little scrutiny is required to discover that these members of cooperatives want more than anything else as sellers to be paid for the grade or quality delivered and, as purchasers, to safeguard themselves on the matter of quality and serviceability."

Control Through Codes

Attempts to control the chiseler through industry codes are also recent evidences of what underlies the quality aspects of our present marketing situation, said Mr. Fairchild. While control of selling price was doubtless the major objective, a very significant proportion of the various industries either included standards in the codes or indicated the definite intention of establishing standards as a basis for marketing.

In discussing present trends in judging product standards, Mr. Fairchild said:

"There are today rapidly growing numbers of consumer-organizations, county councils, clubs, institutes, leagues, generally with a two-fold objective, namely: educating the consumer, and making her desires felt.

"In spite of the conventions, resolutions, and articles on the subject, many executives still consider the consumer as inarticulate. But is she? Ask the officers of the Better Business Bureaus about the increasing percentage of complaints from consumers.

"There is also today definite and articulate pressure for informative labels, serviceability facts, grade marking, and other assurances of quality. Proof of this demand is found in the cash-register experience of retailers and mail order houses, through whose records the fact has come to be accepted that an immediate and sustained increase in business follows informative labeling, quality grading, certification as to quality, and like steps on the part of the seller.

Educational Work

"While clubs and other organizations are at work for truth in merchandising, there are many similar groups devoting considerable thought and skill to the education of the consumer.

"The American Home Economics Association has published a series of leaflets inviting attention to the chief characteristics of items of special interest to the housewife. The American Association of University Women has released a number of pamphlets on problems affecting the consumer.

"The consumer's project of the U. S. Department of Labor is working for the enlightenment of the consumer in a number of interesting ways. The Household Finance Corp. has published a series of 'Better Buymanship' bulletins and at least one large distributor, operating a number of retail stores and mail order houses, has issued a hand book of inside information of facts as a guide to better buying."

Results Intangible?

Some will consider the accomplishments in this direction to date as intangible, continued the speaker, and surely consumers, private or professional, can never be expected to absorb all the minutiae of detail that constitutes the quality characteristics of the multitude of things they buy, but there *is* definite evidence of an increasing interest in, and demand for goods of higher quality, in some instances for qualities above those now regularly produced.

There can be little doubt that the consumer has developed an increasing appreciation for quality, particularly that quality which stands up in service and maintains its character and original appearance.

In response to these trends in consumer appreciation of quality, consumer demands, and truth in merchandising, many companies are placing more emphasis on quality, Mr. Fairchild declared. There is scarcely an important company in the United States which does not purchase its raw materials on the basis of specifications and inspection, supplemented in many instances by direct, legally-binding certification of quality from the suppliers.

Quality More Uniform

These companies are in numerous cases classifying their own products and increasing the number of factory inspections so as to maintain more uniform quality. More progressive manufacturers and associations are voluntarily establishing national classifications, definitions, standard methods of tests, grades, sizes, tolerances and gauging systems, and are assuming the full responsibility for delivering to the consumer the quality as advertised or marked.

"The consumer's response to these voluntary disclosures and the assumption of responsibility for grade or quality," he said, "has been gratifiying and stabilizing in its effect on the business concerned, and in some instances, has brought an industry out of the depths of discouragement and despair into the sunlight of virility and prosperity.

"I wish there were time to tell you in detail about the accomplishments of the red cedar shingle industry. How, on the basis of a nationally-recognized commercial standard, the shouldering of responsibility for quality by means of certificates on every bundle, and group advertising, business on No. 1 grade has so greatly improved that not only has there been a tremendous increase in total volume but a significant relative shift from the lower grades to the No. 1 grade.

"Naturally there is more satisfaction for both buyer and seller in the best grade, but the more significant fact is the consumer's willingness to pay for top quality if he is convinced he is getting it."

Future trends of the situation were viewed by Mr. Fairchild as follows:

"As the sales executive rides the returning flood of prosperity, it seems to me that these highlights of background and today's marketing situations in the foreground, reveal strong trends and illuminate a multitude of signs pointing in the same direction. These signs have not only been read but have been followed by a number of our more discriminating and courageous executives.

"In fact one can scarcely escape the conviction that the successful sellers of the future will be those who take the steps necessary to climb out of present defensive positions and voluntarily lead in giving the buyer what he wants in the way of truthful, factual information, thus rendering impotent and unnecessary the present popular clamor for restrictive legislation.

"As I see it," he concluded, "the successful sellers of the future will be taking one or more of the following strides in shouldering more responsibility for product quality:

Control by Associations

"1. By individual companies or preferably by industry-wide associations, they will establish definite classes, grades, sizes, tolerances, gauging systems, methods of test, and other standards as yard sticks for rating or classifying product characteristics or performance.

"2. Within each class, grade or standard, they will leave ample latitude for individual company variation and selling-points, for initiative in the direction of improvements, and complete freedom in style and design.

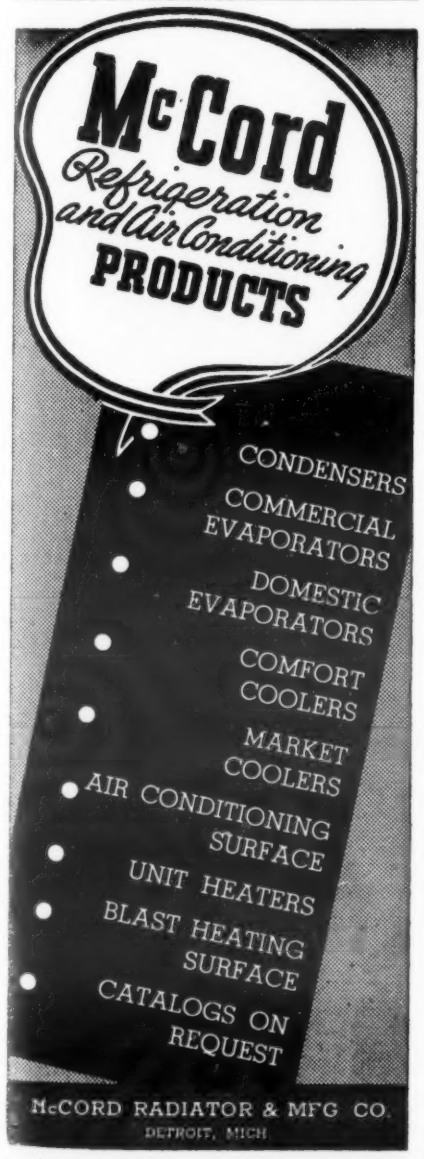
"3. They will tighten factory inspection of both processes and product so as to comply consistently with such classes, grades or standards, not content merely to shoot at the accepted target of quality, but intent on hitting it continuously.

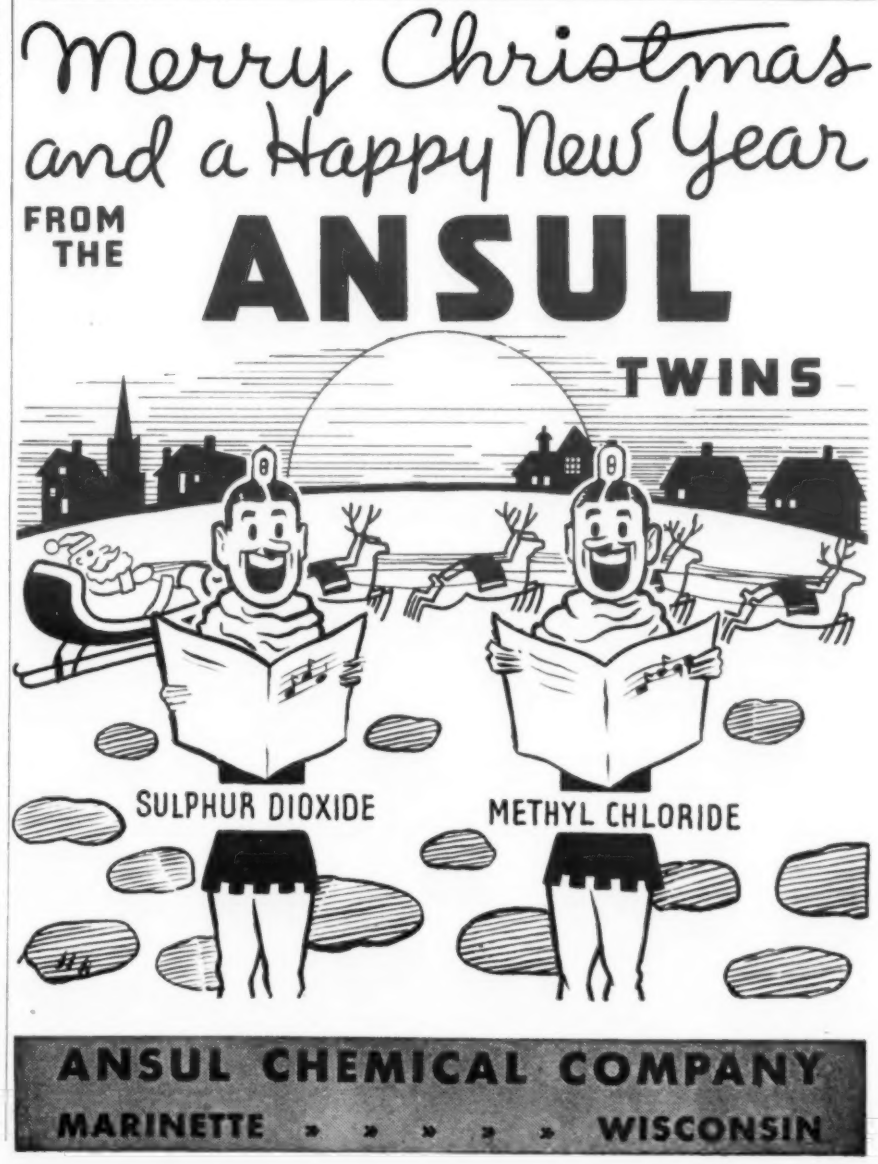
"4. They will use the standard classifications and grades as foundations for both individual and group advertising, trade promotion and correction of unfair practices, and they will back up such advertising and trade promotion with the full-force of trade brands and company reputations.

Assuming Responsibility

"5. Furthermore they will assume full responsibility to the buyer for product conformance with such classes, grades, and standards, by means of voluntary and legally-binding statements in advertising, on invoices, certificates, and labels, or grademarks on the goods themselves.

"6. Having ceased to resist the strong trends heretofore cited; having emerged from their previous defensive positions; having avoided any need for restrictive legislation; having taken the lead in the progressive and constructive cooperation necessary to classifying, grading, and establishing standards as a basis for marketing their products; and having assumed full responsibility for complying with such classes, grades and standards, these successful sellers will enjoy the confidence and good will of the consumer toward both the producer and the product; and will forge ahead to higher levels of competitive opportunity, consumer acceptance, and stability."





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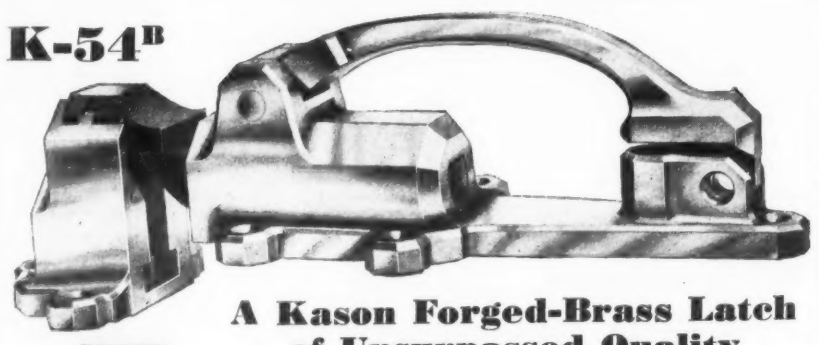

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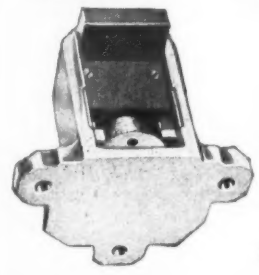

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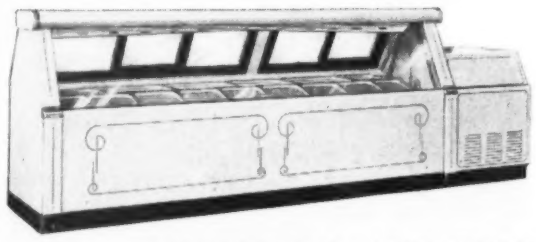

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SECTION NO. 7
Heating (Continued)

Miscellaneous Typical Connections (Cont.)

Fig. 19 shows a step-up in elevation of a steam main for a vapor or vacuum system. If the drip connection is to a wet return, the trap may be omitted.

Vacuum System Step-Up

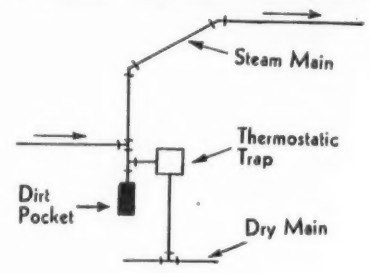

Fig. 19

Fig. 20 shows a swing connection for relieving expansion in long mains, when the change in elevation is downward with respect to steam flow. If the change in elevation is upward, a drip trap and dirt pocket must be provided.

Swing Connection

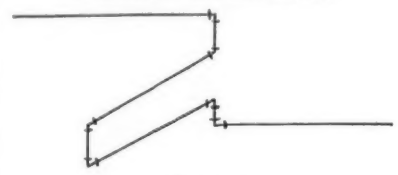

Fig. 20

Fig. 21 shows the method of looping a steam or return main around doors, beams, and other obstructions. In case of steam mains, carry the full size of the main around the upper loop, sizing the lower loop to carry the condensation only which may be present. In case of return mains, carry the full size of the main around the bottom of the loop, using a line of about one-half the size of the main for the top loop.

Looping Around Beam

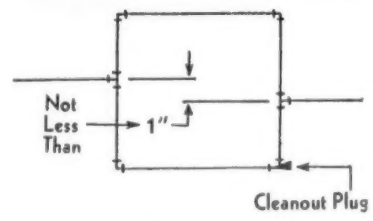

Fig. 21

Fig. 22 illustrates a lift pocket for use where rises in elevation are necessary in vacuum return lines at the vacuum pump. Lift pockets for use throughout the system may be identical except that the reservoir may be omitted and the lower bushing may be screwed directly into the bottom of the tee.

With this type of lift pocket, the bottom of the riser should extend down to the level of the bottom of the return inlet. Although the maximum lift per lift pocket should not exceed 5 feet, several lifts may be used in series where a greater lift is required.

Lift Pocket

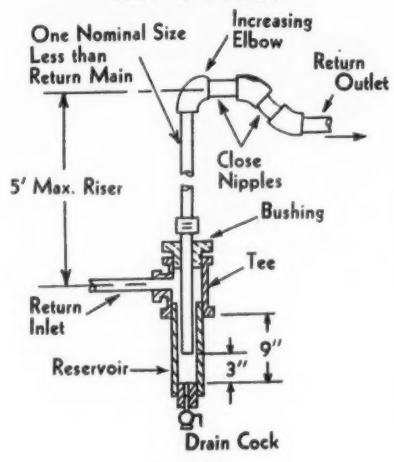

Fig. 22

In Fig. 23 are shown typical connections between radiator and riser, arranged to allow for expansion. These connections may be used for supply or return for either hot water or steam system.

It is preferable to bring the steam connection from below so that the condensate will not drain from the steam to the radiator.

In the case of the hot water radiator it is preferable to bring either the supply or return connection from above, so that air will pass from the radiator into the piping system to be vented at some central point.

Steam Expansion

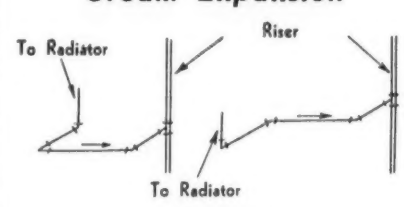

Fig. 23

Fig. 24 shows typical hot water supply or return connections arranged to allow for expansion.

Hot Water Expansion

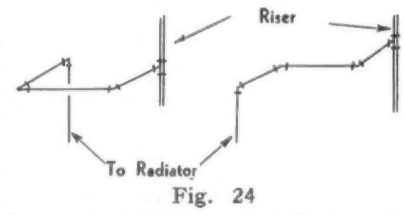

Fig. 24

Fig. 25 illustrates a steam connection to a radiator from an overhead main, arranged to allow for expansion, and prevent condensation from draining from the main into the radiator.

Overhead Main

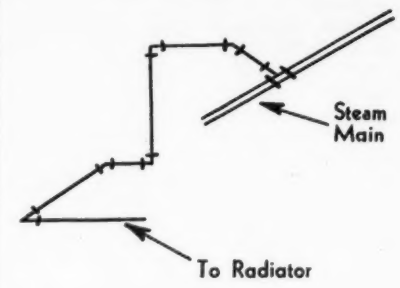

Fig. 25

Fig. 26 depicts a steam connection to a radiator which is at the bottom of a downfeed steam riser, demonstrating a drip connection arranged to prevent the passage of condensation from the riser to the radiator. The connections must be arranged to allow for expansion.

Radiator at Bottom

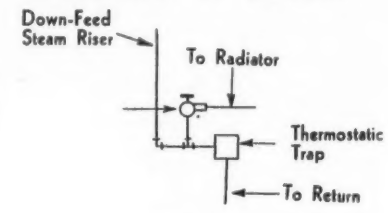

Fig. 26

Fig. 27 shows a typical radiator connection for a one-pipe steam system.

One-Pipe Steam System

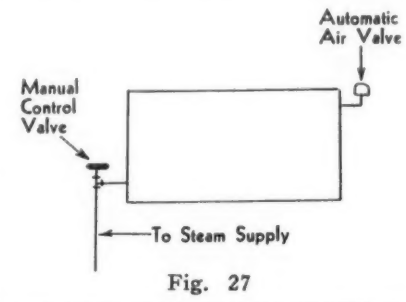

Fig. 27

Fig. 28 shows the recommended method of connecting a unit heater into a one-pipe system.

Unit Heater Connection

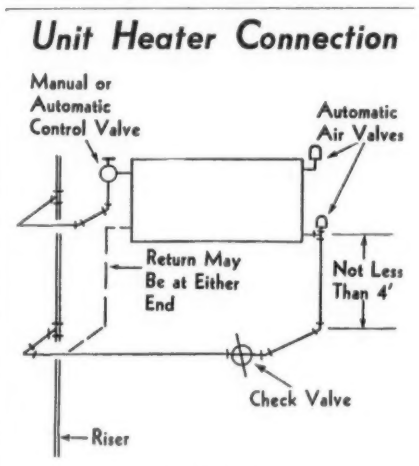

Fig. 28

Fig. 29 shows a typical radiator connection used with two-pipe gravity systems.

(Concluded on Page 15, Column 1)

Two Pipe Gravity System Connection

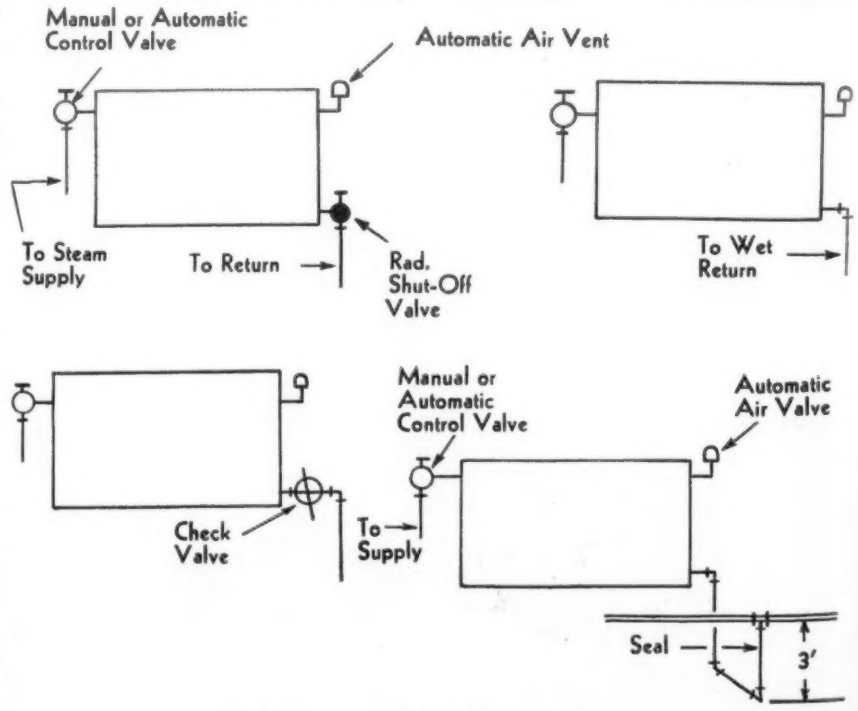

Fig. 29

Miscellaneous Typical Steam Connections

(*Concluded from Page 14, Column 1*)

Fig. 30 shows a typical radiator connection for use in connection with vapor and vacuum systems.

Vacuum System

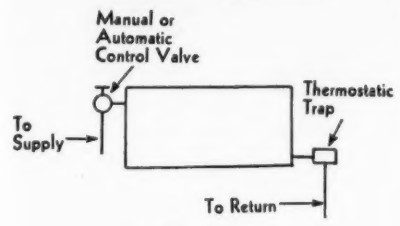

Fig. 30

Fig. 31 shows a typical radiator connection for use in connection with forced or gravity hot water heating systems. With installations where neither the supply nor the return main runs upward an automatic air valve must be provided on the radiator.

Forced or Gravity System

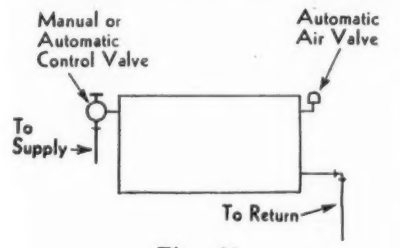

Fig. 31

In Fig. 32 is shown a typical radiator connection for use in connection with forced or gravity hot water systems. No air valve on the radiator is necessary, because the air may pass upward into the piping system through the supply connection to be vented at the high point of the system.

Without Air Valve

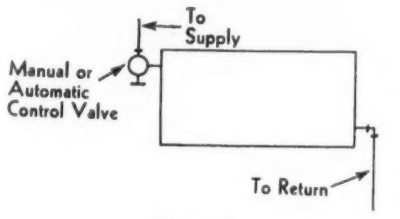

Fig. 32

Fig. 33 illustrates a typical radiator connection for use with forced hot water systems. No air valve is necessary, because the air may pass into the piping system through either connection.

Forced Hot Water System

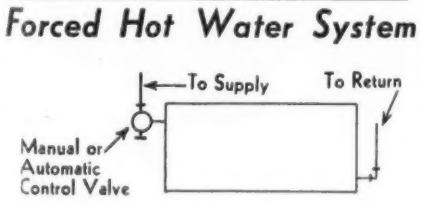

Fig. 33

Typical "open" expansion tank connections for use with forced or gravity hot water systems are shown in Fig.

Open Expansion Tank

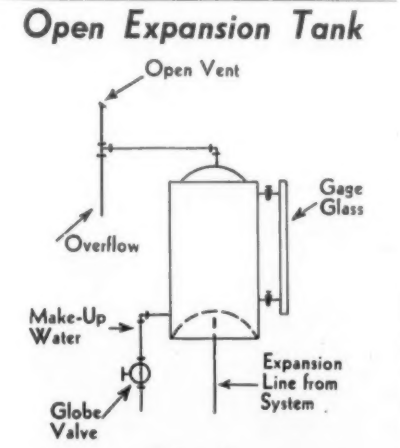

Fig. 34

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34. The tank must be located at a sufficient height above the highest radiator that the resultant water pressure head will prevent boiling at the highest desired water temperature. The volume of the tank should be about 10% of the volume of water in the remainder of the system.

Tank and connections must be located so that they cannot freeze, as the stoppage resulting from ice may allow the pressure in the system to rise to the point of danger.

Fig. 35 shows typical "closed" expansion tank connections for use with gravity or forced hot water systems. This type of tank must contain a portion of air so that variations of water volume in the system may be compensated automatically by resultant variations of the air volume in the expansion tank.

A sufficient pressure must be carried to prevent boiling at the highest water temperature to be used. The volume of the tank should be about 10% of the volume of water in the remainder of the system. The "closed" expansion tank usually is located in the basement, and may be placed as desired.

Closed Expansion Tank

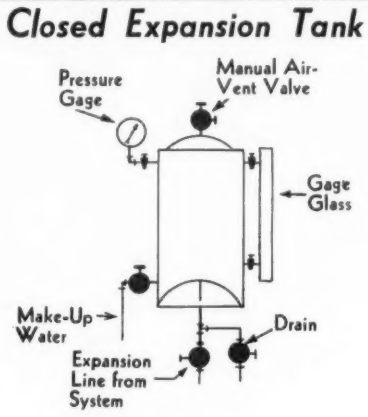

Fig. 35

A recommended method of connecting the forced air heating unit into *dry returns* of the two-pipe, vapor vacuum, or gravity system is illustrated in Fig. 36. Since this method returns both air and condensate to the return system, it cannot be used with wet returns. Where connection must be made to wet returns, see Fig. 37.

Dry Returns

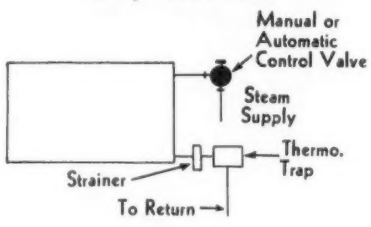

Fig. 36

Fig. 37 shows a recommended method of connecting the forced air heating unit into a wet return. This method is approved also for connecting the larger forced air heating unit into either wet or dry returns of the vapor or gravity system. With this method, the condensate is passed through the float or bucket trap, while the air is eliminated from the system through the automatic air valve.

Wet Returns

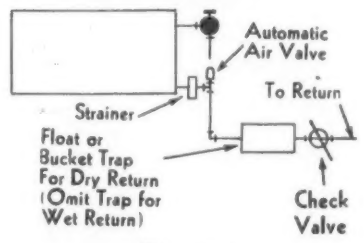

Fig. 37

A recommended method of connecting the larger forced air coil into the vacuum system is shown in Fig. 38. With this method, the thermostatic trap passes air, while the float or bucket trap passes condensate.

Connecting Forced Air Coil

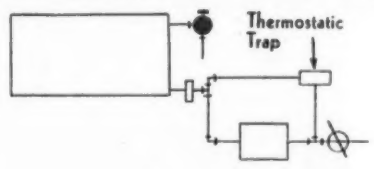

Fig. 38

Mobile Bank Asks Bids On Cooling Job

MOBILE, Ala.—First National Bank of Mobile, through engineers Leo S. Weil and Walter B. Moses, 427 S. Peters St., New Orleans, has asked for bids on installation of an air-conditioning system in its eight-story building.

Pre-Cooling System Cuts Denver Hotel Operating Costs

DENVER—A refrigeration and air-conditioning system which has as one of its principal features the utilization of the normal air conditions of this western region has been installed in the Park Lane hotel here. The installation was made by Electrical Products Co., Carrier distributor in this territory.

The system uses the high-pressure method of air distribution, and takes advantage of climatic conditions here, where it is possible to obtain a wet bulb reading of 65° F., when the dry bulb temperature is well over 100° F.

By construction of a cooling tower for the water used in pre-cooling the air, Electrical Products engineers were able to drop the air temperature to between 60 and 70°, eliminating from 20 to 25° usually necessary refrigeration and effecting a considerable saving in operating costs.

Air to be pre-cooled was passed through a series of tubes containing the tower-cooled water, without coming in contact with the water itself.

The air-conditioning system is of 15-ton capacity, completely automatically controlled. Bedrooms, cocktail lounge, ladies' lounge, and dining room of the hotel are conditioned by the equipment. Outside air is used 100% in the system, and is circulated fast enough so that exhausted air from the adjoining rooms will also cool the hotel's lobby and kitchen.

The kitchen and bakery of the hotel are equipped with stainless steel refrigerated storage cases, operated from the central refrigeration plant. Several two-compartment boxes are located in the kitchen, as well as a meat box, vegetable box, pantry box, and a baker's box.

One of the problems encountered in conditioning the kitchen was that of exhausting its odors and smoke without running an unsightly conduit to the roof, 12 stories above, or blowing the fumes out of the window.

Stainless steel hoods, built over the ranges and dish-washing machines, collect the odors and exhaust air from the dining room, and force them down to the boiler room, washing them first in a 210-jet spray which collects all the grease particles.

A special refrigerating unit was installed for the hotel's bar. This served to cool bottled goods and the open chipped ice compartment. Several additional compartments are also included, where various degrees of refrigeration may be obtained, from actual freezing to chipped ice storage with a minimum of freezing.

Conditioners Overcome Illumination Load

LOS ANGELES—Two General Electric air conditioners, equipped with a 40-ton plant furnishing 28,000 c.f.m., have solved a serious illumination problem in the downtown store of Brooks Clothing Co.

During the summer the provision of adequate lighting facilities resulted in an uncomfortable amount of heat. Yet a decrease in lighting was definitely unprofitable from a merchandising standpoint. Consequently, company officials decided on the air conditioning system.

Suction fans were installed to draw the air under the store's mezzanine.

Seven Newark Men Win Bermuda Trip

NEWARK—Seven members of the Northern Air Conditioning Corp., winners in a General Electric air conditioning dealers sales contest, will sail Jan. 6 on a trip to Bermuda and Havana.

H. R. Van Vleck, president, T. W. Osbahr, vice president, M. E. Winans, sales manager, and four salesmen, W. N. Baldwin, W. H. Lewis, E. S. Baldwin, and G. T. Long, are the trip winners.

Northern Air Conditioning Corp. is part of the General Electric Co. of Newark.

Large Installations Made in Hot Springs

HOT SPRINGS, Ark.—Several sizable air-conditioning installations have been completed here within the last year, according to a recent survey among local dealers.

Carrier equipment was installed in the new National Park offices, a 20-ton Carrier job was placed in the local Walgreen drug store, and six or more individual Carrier units were purchased by the Arlington Hotel.

Kilgore Bros., Frigidaire dealer, reported a three-ton residential job at Prescott, Ark.

Although the building is still under construction, owners of a large local apartment house are now in the market for a 40-ton air-conditioning plant.

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The Newest KOCH PRODUCT
CORKBOARD INSULATION
ALL-STEEL CONSTRUCTION
Built for SERVICE Priced to SELL
TRIPLE GLAZING · RUBBER DOORS
DOUBLE DUTY · 6½, 8 and 10 ft. LONG

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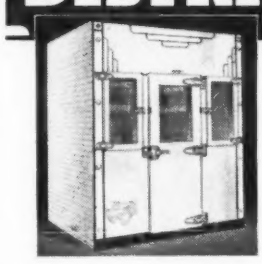
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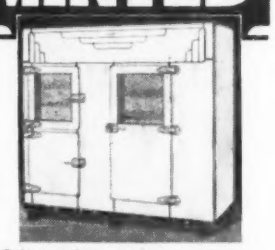
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Desirable territories still available. Write for complete information.
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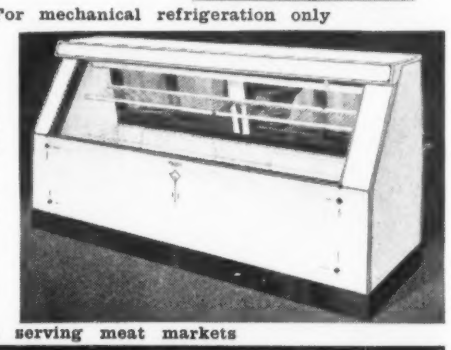
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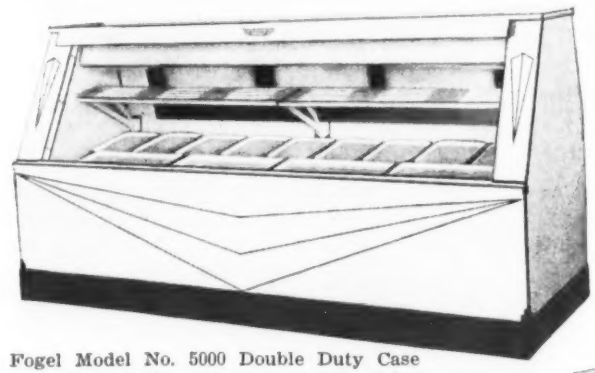
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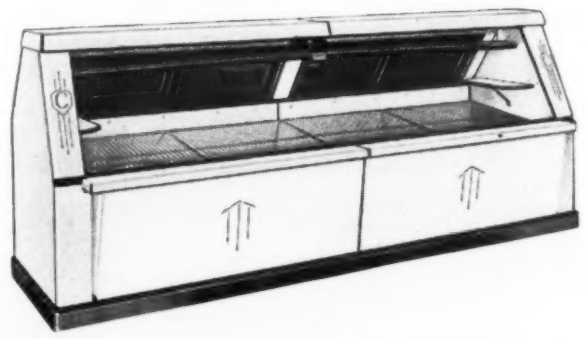
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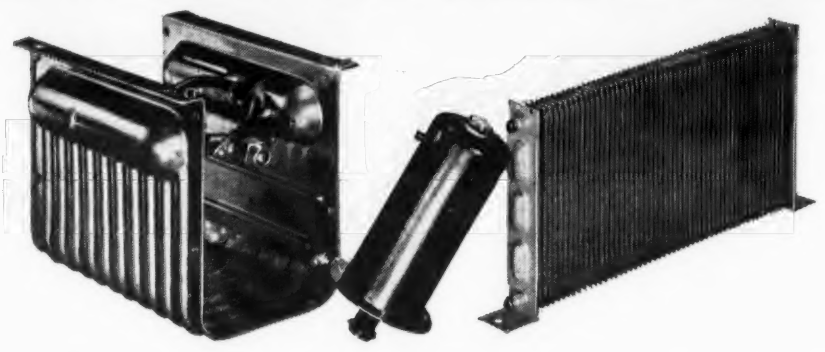
The Buyer's Guide

Suppliers Specializing in Service to the Refrigeration and Air Conditioning Industries

SUPPLYING THE REFRIGERATION INDUSTRY



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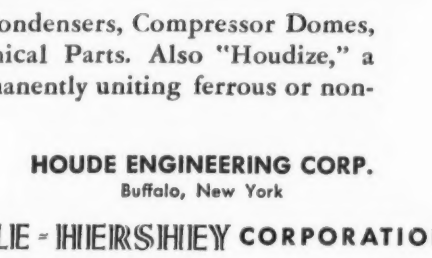
A nearby distributor carries a complete stock of Dayton V-Belts at all times and can quickly supply you. Write us for price list and complete information.



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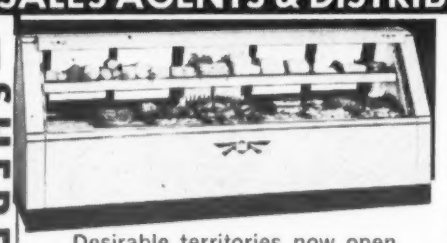

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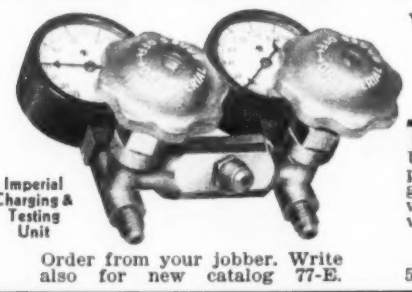

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LOS ANGELES

Chapple Tells Warm Air Heating Group That Air Conditioning Business Must Be Won by Effective Merchandising

(Concluded from Page 1, Column 2)

46° F.," by S. Konzo, special research associate, Engineering Experiment Station, University of Illinois; and "Summer Cooling Using Well Water," by C. D. Leiter, Ashland, Ohio.

Also emphasized at the convention was the need for new merchandising methods to meet a new era in home heating and air conditioning.

Also expressed was the feeling that warm air heating contractors should prepare themselves to take advantage of the great public enthusiasm for air conditioning brought about by the publicity and acceptance given to the rapid growth of comfort cooling.

Said Bennett Chapple of the American Rolling Mill Co., in discussing some probable merchandising trends, "Great as are the prospects today, that does not assure to the manufacturers who have been making warm air furnaces for years the right to consider this business and to control it as their sole heritage.

"A man intimately identified with the industry recently made the statement in a public address that it was his opinion there were more people trying to participate in the air conditioning industry than has ever been known in any other lines. He stated that he would not except even the radio industry when the great rush was on just a few years ago.

"You know more than I about the number of manufacturers that have entered the industry of making air conditioning equipment both as complete units and as appliances," said Mr. Chapple. "You know only too well that there has been a great influx of dealers and jobbers. This is the logical happening with the launching of any great new development.

"Like the rush into a new oil or gold field, the area is over-run with newcomers. Business booms. Buildings and building lots go up in value. But it so often happens that but few of the old timers on the site reap the real profits. It seems that too often they have become so accustomed to their surroundings and their habits of living and their regard of values they have always known, that they do not realize the new situation until outsiders have gobbled up the bulk of the profits.

"It would be most unfortunate if history were to repeat itself in this direction in connection with air conditioning. From what I learn, there is a grave danger of this very thing occurring.

"Prior to air conditioning, the public never become very greatly aroused about warm air heating. You, as manufacturers and dealers, were throughly sold on the idea that warm air heating was the very best type, providing healthful conditions, humidification, circulation, and the like, but the public never caught the fever as they did with radios and automobiles.

"Looking back at those years we may now ask ourselves whether it was something lacking in the heating system or in the method of merchandising and distribution. It must be admitted that the spark to touch off popular acceptance was lacking, and strangely enough, the spark that did set off the great wave of public sentiment was cooling rather than heating.

"The public, after having experienced the comfort of cooling in theaters, stores, restaurants and more recently in railroad trains, were in a most responsive mood when the news was released that equipment was available for providing comparable conditions in their homes.

"Then, too, there is a tremendous opportunity in the replacement of furnaces. I have received a copy of a recent survey made by one of the members of your association, which shows more than eight and a half million furnaces in use and a replacement market of at least two million of these furnaces.

"Is it possible that the merchandising methods of the industry need overhauling? We have referred to the advent of manufacturers to this industry who have long been recognized for their progressive merchandising methods in other industries. These are organizations that have never sold their merchandise by the pound. Their merchandising methods have been based on selling comfort, convenience, and service rather than commodities.

"They have made such an outstanding success by following such a merchandising policy that it seems reasonable to conclude they will follow that same policy in merchandising their heating and air conditioning equipment. This bespeaks a necessary change for those manufacturers who have been basing their merchandising on a pound or unit price.

"The advent of such competition," Mr. Chapple emphasised, "should not be regarded with any serious concern by any progressive manufacturer, but rather should be welcomed as a pace-maker."

Myers Sees Necessity for 'Super Service' Stations

Frank Myers of the Industrial and Structural Products Division, Owens-Illinois Glass Co., envisualized the establishment of "super-service" stations by warm air furnace contractors as a necessary adjunct to their business, because of the public acceptance of air conditioning.

"At one time, the warm air industry had a road to the residential heating market: The furnace manufacturer, over a well-established distributing and servicing road drove his product to the consumer.

"We had another road, too, over which the boiler and radiator manufacturer carried his product into the *same* market.

"Servicing this market was a simple matter. If the heating equipment needed attention, there was straight line contact with the installer of one or the other type of equipment.

"Then came the oil burner, the gas appliance, and the stoker. Three more distinct avenues of approach to the residential heating market were opened and the servicing of the heating equipment, that was later equipped with these accessories, became increasingly more complex.

"Without question, the residential heating industry has been benefited and advanced tremendously because of the aggressive advertising, selling, merchandising, and servicing programs of the manufacturers of accessories. The public was more conscious of heating systems than it had been for a generation or more. But servicing became a real problem.

"Isn't it quite possible that the future will see what might be called *'super-service'* stations in the heating industry? That is, well-rounded sales and service organizations, the personnel of which is capable of handling any situation that might arise.

"Let's start with the sales end of the 'super-service' heating organization. For service begins with a sale, whether we wait for an order to come in, or whether we go out after it.

"The so-called 'furnace man' has long been criticized for his lack of merchandising and selling ability, but sales statisticians tell us that *39.4% of the dwellings in the United States are equipped with warm-air furnaces* as against 8% steam and vapor and 6.4% hot water. If this statement is true, then warm air heat has sold itself.

"Whatever may be said of the sheet metal man, upon whom the warm air industry depends for the distribution of its products, he is to be more than ever before an important factor in the establishment of *'super-service'* heating organization of the future.

"Why? Because *modern* residential heating—(and we must include the three kinds of air conditioning)—because *modern* heating demands doing certain definite things with air, and then directing the movement of that air in proper volume and velocity and under properly controlled temperatures to certain predetermined areas.

"The original engineering of such systems and the installation and adjustment of this equipment is the particular function of the warm air man. He will be the nucleus around which must be built the 'super-service' heating organization of the future. Regardless of the aggressive merchandising and selling of the front office, the organization will stand or fall depending upon the character of its service personnel.

"This condition is to be found in any of the large appliance industries today. How often the consumer is soured on his particular make of refrigerator, or automobile, or radio simply because he has not been getting the type of service which he believes he is entitled to receive?

"Sales and service go hand in hand. Each department must profit if the organization as a whole is to profit and progress. We are all familiar with one large industry which has suffered through lack of recognition of the dealer salesman in the profit picture.

"We all know that the sheet metal man has been known to grab up a good mechanic and pay him well for his work. But let a good *salesman* approach him with a proposal to go out and sell; to contact architects and builders; to work with realtors when demonstration homes are open for inspection; secure publicity and do some merchandising which will build that business—and our furnace man has been quite reluctant to open his mind and purse to the idea.

"But the service problem no longer is one involving the sheet metal worker alone. What the oil burner, stoker, or gas appliance dealer knows about his product is to a great extent offset by his lack of knowledge of warm-air heat, radiation, convection, conduction, building construction, insulation—or, in other words, *heat engineering.*

"You may say: 'Aren't we building up in our minds a service problem which may not or does not exist?' . . . and we answer the question by directing you furnace manufacturers to the units you are now producing. Look

(Concluded on Page 18, Column 3)

New Westinghouse Air Conditioner Uses Hermetic Condensing Unit

(Concluded from Page 1, Column 2)

be installed in 25 minutes, Mr. Myers emphasised. This feature will eliminate one of the principal objections to the purchase of room coolers, he believes.

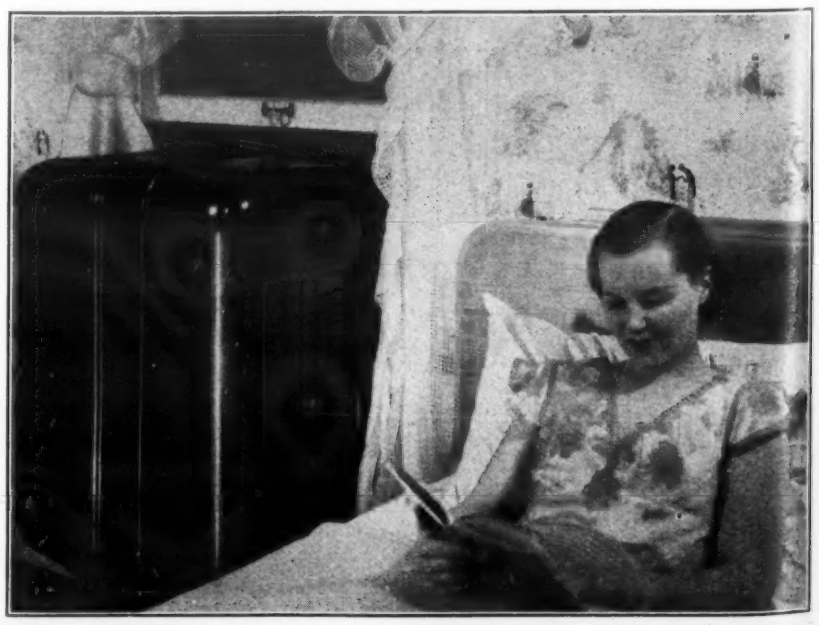
Cooling and dehumidification capacity of the unit is equivalent to the heat absorption obtained by the melting of one-half ton of ice per day, it is claimed.

All the air used by the cooler passes through an air filter before passing over the cooling coils, assuring fresh dehumidified air at all times. Room air which has "gone stale" is expelled from the room into the atmosphere outside.

Other features of the new room cooler include a hermetically-sealed condensing unit; the exclusive Westinghouse built-in Watchman, to guard against motor overheating; a compressor and motor cooled by refrigerant lines around the shell; a powerful oil pump that assures positive and adequate lubrication; air filters, to insure clean air; a ventilating damper, permitting exhaustion of foul air from the room; and insulation designed to deaden noise and permit quiet operation.

A metal drip pan catches condensate from the dehumidifying coil; a 12-inch blower fan is used to speed condensing action; solid steel framework eliminates vibration; rubber cushions prevent passage of noise to the cabinet cover; an air-cooled condenser on the outside of the room is sealed against the weather. The cabinet is of compact design, and is walnut finished.

Comfort for Milady



The new Westinghouse self-contained room cooler, especially applicable to bedrooms, uses a hermetically sealed condensing unit. The conditioner embodies an air filter and a damper for exhausting foul air.

COMMERCIAL Service Manual

By K. M. NEWCUM

Service Operations on Flooded Evaporators & Float Valves

CHAPTER 7—Evaporators & Refrigerant Control Valves

Lowside Float Valves and Evaporators

Evaporators employing the lowside float valve are properly termed "flooded evaporators," for this type of lowside is flooded with or full of liquid refrigerant at all times up to a predetermined level which is automatically maintained by the float valve.

The cycle of operation in a flooded system is clearly illustrated in Fig. 93. It may be defined as follows:

"With the compressor in operation the pressure in the evaporator is reduced and the liquid starts to boil. This vapor is drawn down into the compressor via the suction line where it is compressed and forced into the condenser thence into the liquid receiver. With boiling or vaporization taking place in the evaporator the liquid level is lowered which allows the float ball to lower thus drawing the needle away from the valve set. As the needle moves away from seat, high pressure liquid from the liquid receiver via the liquid line is fed into the evaporator. This liquid thus admitted fills up the evaporator or what is the same thing, raises the float ball thus closing the float valve. As continuous vaporization is taking place during the running cycle, the liquid level continues to lower and again be replenished by the action of the float valve, automatically, during this complete running cycle."

When the motor control starts the motor and compressor it is prompted to do so because the refrigerator, evaporator and refrigerant temperature has reached the highest desirable point or what is commonly known as the "cutting in" point.

With the temperature at its highest point, it will be observed that the pressure on the low side will also be at a corresponding high point, for the higher the refrigerant temperature the higher the pressure.

It will also be noted in Fig. 93 that all the liquid and vapor in the evaporator suction line and compressors are in the same circuit which in effect makes the evaporator and the liquid contained therein act as a thermostatic bulb.

At the beginning of the cycle the lowside or back pressure is high. As the compressor continues to draw the vapor off, the refrigerator, evaporator and refrigerant temperature is gradually lowered. This lower or lowest refrigerant temperature or pressure is known as the cutting out point or the point where the lowest desired refrigerator temperature is reached and the motor control stops the compressor.

During the off cycle the pressure gradually builds up again to the cutting in or highest temperature point.

Let us assume that as a result of a leak in the system a part of the refrigerant charge leaked out of the flooded system to a point where the liquid level in the receiver was below the liquid tube. Then when the float valve opened, hot high pressure gas would be admitted to the evaporator. This gas would raise the liquid level in the evaporator and as a result the float valve would remain open. The high pressure gas rushing into the evaporator would make a hissing noise which is very noticeable.

This condition would affect also the lowside pressure for with the float open the seal between the high and lowside is broken and with this high back pressure the refrigerant temperature in the evaporator would remain too high to produce satisfactory refrigeration.

By adding refrigerant to the system the liquid level is raised to cover the liquid tube, liquid is supplied the evaporator, the level raises and the float closes, the hissing noise ceases and normal pressure and temperatures are again obtained.

Assume now that the float valve was leaking at the needle and seat even though the level was up and the float was attempting to close. With this condition high pressure liquid would be supplied to the evaporator faster than it could be vaporized. The pressure in the condenser and receiver would continue to force the liquid from the receiver into the evaporator until the liquid would overflow out of the evaporator into the suction line.

Again here a hissing or rushing sound at the float would be noticed, but with the liquid overflowing into the suction line refrigeration would be taking place there, causing the suction line to become cold and sweat, or in some cases frosted. It is by this cold or frosted suction line that a leaking float valve may be distinguished from refrigerant shortage.

A leaking float valve will also cause the back pressure to run higher than normal during the on cycle, and if the compressor stops with the seal between the two pressure sides broken the back pressure will build up faster than it does during an off cycle under normal conditions.

Often a leaking float valve is caused by a piece of scale or carbon lodging between the needle and seat. This foreign matter may be dislodged by closing the receiver liquid line shut off service valve, allowing the compressor to operate for ten or fifteen minutes. With this valve closed, the flow of liquid into the evaporator is stopped and the compressor reduces the liquid level in the evaporator to a point where the float ball drops pulling the needle away from the seat.

With the needle away from the seat the foreign matter is free. Then by opening the receiver valve a sudden rush of liquid is admitted to the evaporator which should dislodge this obstruction allowing the float to again operate normally.

It is sometimes necessary to repeat this flushing operation several times to obtain the desired result. If after flushing several times the float will not close it must be replaced.

Cycle in Flooded System

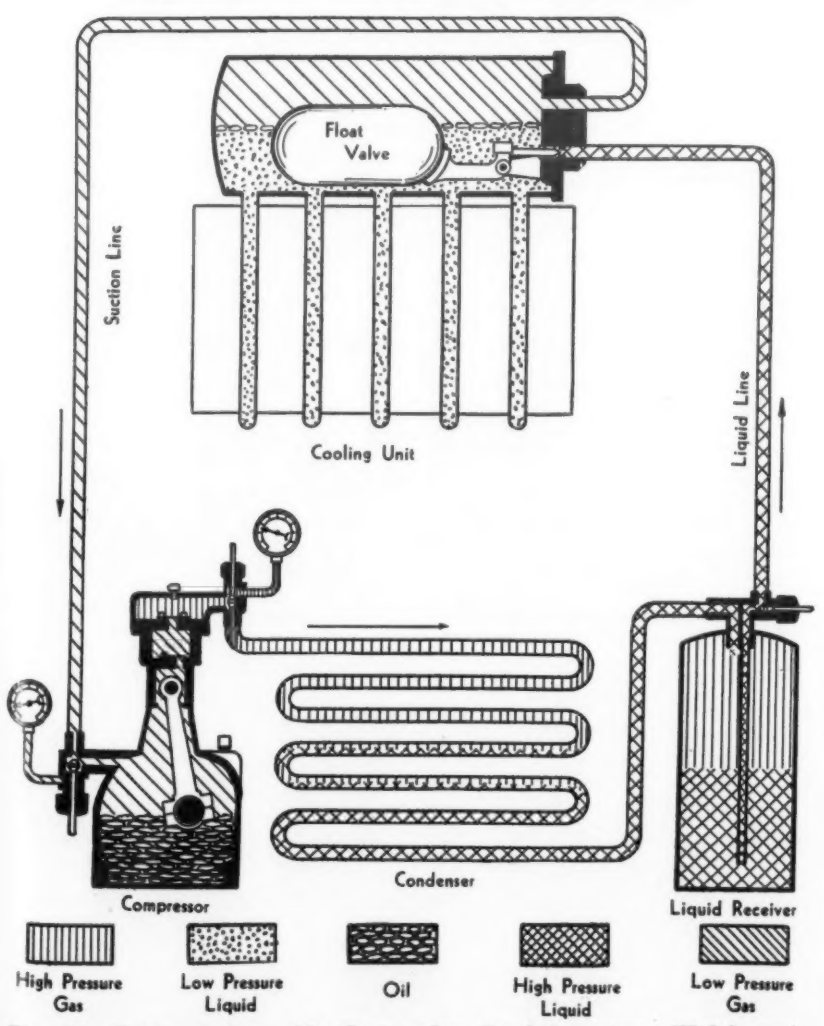


Fig. 93—Cycle of low side float valve flooded system (Kelvinator).

Studies by German Show Oil Viscosity Relationships

WILMINGTON, Del.—An article by Dr. A. Perlick in one of the issues this year of *"Zeitschrift fur dem gesamte Kalte Industrie,"* German technical periodical on refrigeration, gives further substantiation to findings in this country to the effect that there are important differences in the pressure-temperature-composition relationships of methyl chloride and oils of widely varying viscosities, states E. W. McGovern, chief engineer of the R. & H. Chemical Dept., E. I. du Pont de Nemours & Co., Inc.

Dr. Perlick compiled data on oils that have viscosities of approximately 720,480,290 and 87 seconds Saybolt at 100° F., respectively; and pour points of 5° F., 5° F., —4° F., and —40° F., respectively; from which data the following may be noted:

(1) At a given condition of temperature and pressure, a higher viscosity oil dissolves less methyl chloride then does an equal weight of a lower viscosity oil.

(2) Solutions of methyl chloride in higher viscosity oils have higher vapor pressures.

(3) Solution of a high viscosity oil in methyl chloride causes less increase in boiling point than does an equal percentage by weight of a lower viscosity oil. For example, the boiling point of methyl chloride at atmospheric pressure is increased about 4.3° F. in a 50% solution of 720-second oil, but only about 2.5° F. in a 50% solution of 87-second oil.

"It may be," says Mr. McGovern, "that actual machine tests would show that the advantages of very high viscosity oils compared with those now used with methyl chloride (up to 320 seconds) outweigh disadvantages.

"It would at first appear that technical disadvantage of very high viscosity oils would include high pour point, greater foaming tendency, and poorer heat transfer through oil films on evaporator tubing.

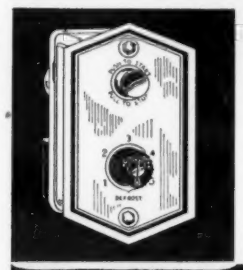
"As to pour point, this is lowered greatly by even small amounts of methyl chloride. Greater foaming tendency of oil containing a given amount of methyl chloride would be a disadvantage in the crankcase, but this might be more than offset by the fact that smaller amounts of methyl chloride dissolve in the higher viscosity oils.

"Greater foaming tendency would be an advantage in flooded evaporators. Whether or not decrease of heat transfer through the evaporator would be could be told only by further experiment. . . . Difficulty in handling a thick oil might be avoided by adding a small percentage of the refrigerant with which it is to be used."

Observations made in Dr. Perlick's experimental work, said Mr. McGovern, confirm conclusions reached as a result of practical experience to the effect that methyl chloride-oil solutions tend to superheat increasingly as the oil content increases. Therefore, as the oil content of flooded evaporators increases, they tend to become even further oil-logged, and ebullition aids may be necessary.

The Buyer's Guide

Special rates apply to this column only.
Write Advertising Dept. for full information.



EXACT REPLACEMENTS

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RANCO, Inc., Columbus, Ohio

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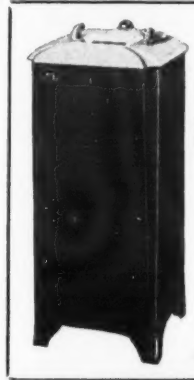
The ORIGINAL Stainless Steel Thermostat



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ELECTRIC WATER COOLERS
Thoroughly reinforced all steel attractively finished cabinets.
Complete line of different Models and Capacities.
Write for details and sales prices.
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HENRY
TYPE 712
Dehydrator
WITH DISPERSION TUBE

Dispersion tube exposes entire volume of dehydrant to penetration by refrigerant. Maximum drying efficiency with minimum pressure drop. Soldered copper shell. Complete range of capacity and fitting sizes. Choice of five dehydrants.

Write for Catalog 51: Dryers, Strainers, Valves and Service Tools.

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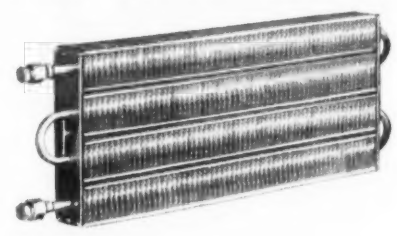
FINNED EVAPORATOR AND CONDENSER COILS

FINNED COILS FOR ALL PURPOSES
STEEL — COPPER — ALUMINUM AND SPECIAL METALS
Positive thermal bond between metals of proper thickness to assure maximum heat transfer.



JACKSON ACME INDUSTRIES Inc. MICHIGAN

U. S. REFRIGERATION GAUGES

Standard of the Trade

All types of Gauges for refrigeration service and original equipment.
Always
ACCURATE . .
RUGGED . .
DEPENDABLE

U. S. GAUGE CO.
44 BEAVER STREET NEW YORK

HIGHEST Filtrine EFFICIENCY
WATER COOLERS
COMMERCIAL — AIR CONDITIONING
From 2 gals. per hour to 500 gals. per minute
WATER FILTERS — STEEL PIPE COILS — SURGE TANKS
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Each Succeeding Day finds
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more firmly entrenched as the predominant system of Truck Refrigeration
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The Buyer's Guide

Special rates apply to this column only.
Write Advertising Dept. for full information.

AND NOW— A 45 Cu. Ft. Refrigerator

The 650—Companion to the popular 350 Model

A six-door Refrigerator, with storage capacity of 45 cu. ft. Equipped with solid or glass display doors in top section. 3" approved insulation, re-tinned steel shelves, extra heavy chromium hardware, and choice of DuLux or Porcelain finish.

Sufficient shelf space in 3 lower compartments for 21 cases of beverage, and enough height on top shelf to accommodate 24 oz. bottles. Greater Capacity, yet it occupies but 13¾ sq. ft. of floor space.

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MANUFACTURERS
Seamless
Brass & Copper Tubing
Refrigerator Tubing
Water Service Tubing
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REFRIGERATION
PARTS *and* SUPPLIES

SEND FOR OUR BIG BARGAIN CATALOG

Dependable service that enables you to give speedier service—and the lowest prices possible. That's what you secure when you deal with "headquarters" for America's largest line. Write for catalog on your letter-head. Branches: New York—Cleveland—St. Louis

100% WHOLESALE WE PROTECT THE DEALER

The HARRY ALTER CO. 1728 S. Michigan Ave. Chicago, Ill.

CAPACITORS

Exact duplicate electrolytic and oil-filled units matching original electric refrigerator equipment. • Stocked by leading jobbers. • Bulletin listing all popular makes of refrigerator motors and their capacitor requirements, sent on request.

Oil units (above) and electrolytics (right). Any capacity, type, mounting.

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AEROVOX

TYLER'S WELDED STEEL *Cases*

• 1937 line offers wide variety and sensational values. 6 big new features and iron-clad guarantee. Only Tyler gives one-piece "welded steel" construction, 100% insulation. Wonderful sales opportunity. Most talked of and fastest selling line on market. WRITE today.

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SIX BIG NEW FEATURES

QUIET GILMER V-Belt

QUIET operation — that's what you get in the Gilmer V-Belt. And, dependability, too. It is made ruggedly, to give long, reliable service. Sleeves list the makes serviced for quick, easy identification. In standard sizes to fit all refrigerators, air-conditioning equipment, oil burners, beer pumps, water pumps, washing machines and wood-working tools.

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THREE WAREHOUSES

LARGE STOCKS
FAST DELIVERY
ENGINEERING ASSISTANCE
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MOST COMPLETE LINE OF
Refrigeration and Air Conditioning Supplies—
Coils — Tubing — Gaskets — Accessory Parts — Valves — Fittings

WILLIAMS & COMPANY, Inc.

CLEVELAND	PITTSBURGH	CINCINNATI
1748 E. 22nd Street	901 Pennsylvania Avenue	Henry & Dunlap Streets

Growth of Heating Service Problems Traced by Myers

(*Concluded from Page 16, Column 5*)

into your own *factory* problems and you can forecast your dealer's *service* problems. Look what the gravity warm air furnace has grown to be!

"If you are perfectly frank with yourself, you will agree that your business was simple until all these disturbing factors—the growing pains of air conditioning—began to inject themselves into your peaceful existence. You, too, had to learn about blowers, filters, and the operation of your furnaces with fuel other than coal fired by hand. When mechanical devices came into being, you were forced to learn about them, or employ engineers who did. Then you modernized your units—advertised your new products, shipped them into the field, and expected your dealers to become engineers overnight.

"We have become accustomed to installing a warm air furnace and then forgetting it. We must now become accustomed to installing a heating plant and never allow ourselves nor our customers to forget it.

Guarantees Coming?

"Isn't it within reason to imagine that the sale of a heat machine will have to be accompanied by a free-service contract or warranty covering a period of time during which the customer will have become thoroughly sold on the comfort, cleanliness, convenience, and low operating cost which were promised him when he made the original purchase?

"The complexity of the modern heating equipment has its advantages from an industry standpoint. Seasonal service calls for cleaning, repair of ducts, piping, replacement of air filters, adjustment of temperature, humidification or dehumidification controls, oil and gas burner, stoker, motors, fans, etc.,—these give the 'super-service' organization another profitable contact with the customer—another opportunity to sell customer satisfaction—another source of leads for the sale of new heating units.

"The market for the replacement of old furnaces with new, modern equipment is enormous. And human nature has not yet changed to such an extent that we are not influenced by what the Joneses do. Let the Joneses clean up their basement, fix up a recreation room, replace their old furnace with a fine, new, modern air conditioner—and the neighbors go into action.

'Super-Service' Station

"The 'super-service' station serving the residential heating industry must recognize *every* factor in the business—and that's exactly what it will be, a *business*.

"We can visualize a well-appointed salesroom where units will be displayed in surroundings comparable to the finest recreation room—so that the prospective customer will not have to stretch his imagination to picture your particular unit in his particular basement.

"We can visualize salesmen, engineers, draftsmen, estimators, and service mechanics and artisans—all graduates of manufacturers' schools and heating clinics. We can visualize business-like office records and accounting forms and systems for periodical service calls and the follow up of prospective new customers.

"We can picture striking window displays, possibly newspaper and radio advertising, and the forceful use of advertising literature offered by manufacturers to produce sales of new equipment and service."

May Use Radio Promotion

As part of its campaign to promote more active merchandising of warm air heating and air-conditioning plants, the association is giving serious consideration to the thought of using a radio program to promote their products to the public. A sample broadcast was given at one of the convention luncheons.

The association's contract with the University of Illinois for continuation of experiments by members of the Engineering Experiment Station in the Research Residence was renewed, with a slightly larger appropriation for this work being granted. Much of the work in the Research Residence at Urbana, Ill., has been on summer cooling.

Officers of the association were all re-elected for the coming year. They include: W. L. Rybolt, Rybolt Furnace Co., president; L. R. Taylor, International Heating Co., first vice president; C. A. Olsen, Fox Furnace Co., second vice president; Allen W. Williams, managing director and treasurer.

New directors nominated for a two-year term include: R. W. Blanchard, Hart & Cooley Mfg. Co.; F. G. Sedgwick, Waterman Waterbury Co.; Buhl Allen, Marshall Furnace Co.; C. Ackerson, Agricola Furnace Co.

Some of the papers presented at the convention on cooling problems will be published in later issues of the NEWS.

Patents

Issued November 17, 1936

2,060,857. THERMOSTATIC VALVE. John De Nicola, Paterson, N. J. Application June 1, 1936, Serial No. 82,684. 7 Claims. (Cl. 137—139)

2,061,007. HEAT EXCHANGE APPARATUS. John A. Potter and John P. Rathbun, Prospect Park, Pa., assignors to Westinghouse Electric & Mfg. Co., East Pittsburgh. Application April 17, 1933, Serial No. 666,582. Renewed May 17, 1934. 6 Claims. (Cl. 261—114)

2,061,077. ICE CREAM MAKING ATTACHMENT FOR MECHANICAL REFRIGERATORS. Ralph D. Lacoe, San Diego, Calif. Application Sept. 26, 1934, Serial No. 745,579. 11 Claims. (Cl. 259—113)

2,061,116. METHOD AND APPARATUS FOR MAINTAINING A CONSTANT TEMPERATURE WITHIN AN INCLOSURE. James K. Thornton, Alma, Mich. Application March 26, 1931, Serial No. 525,475. 8 Claims. (Cl. 62—91.5)

2,061,204. LIQUID CONTROL. Virginius W. Moody, New York, assignor to Reynolds Research Corp., New York. Application May 21, 1934, Serial No. 726,702. 11 Claims. (Cl. 62—91.5)

2,061,344. AIR CONDITIONING APPARATUS. Frederick P. Bingman, Birmingham, Mich., assignor to The R. C. Mahon Co., Detroit. Application Feb. 18, 1935, Serial No. 7,029. 6 Claims. (Cl. 261—9)

2,061,418. TEMPERATURE CONTROL DEVICE. Wallace J. Ettinger, Chicago, assignor to Edison General Electric Appliance Co., Chicago. Application May 22, 1934, Serial No. 726,891. 4 Claims. (Cl. 200—139)

2,061,426. REFRIGERATING APPARATUS. Jesse G. King, Dayton, assignor, by mesne assignements, to General Motors Corp. Application Sept. 30, 1930, Serial No. 485,366. Renewed Oct. 5, 1935. 5 Claims. (Cl. 62—4)

2,061,427. REFRIGERATING APPARATUS. Jesse G. King, Dayton, assignor to General Motors Corp., Dayton. Application Aug. 16, 1935, Serial No. 36,546. 10 Claims. (Cl. 62—95)

2,061,447. AIR CONDITIONING APPARATUS. Reuben H. Anderegg, La Crosse, Wis, assignor to The Trane Co., La Crosse, Wis. Application Sept. 23, 1935, Serial No. 41,767. 10 Claims. (Cl. 62—117)

2,061,453. SHELF UNIT FOR REFRIGERATOR DOORS. Powel Crosley, Jr., and Edward Austin, Cincinnati, assignors to the Crosley Radio Corp., Cincinnati. Continuation of application Serial No. 668,091, April 26, 1933. This application April 5, 1935, Serial No. 14,892. 11 Claims. (Cl. 312—173)

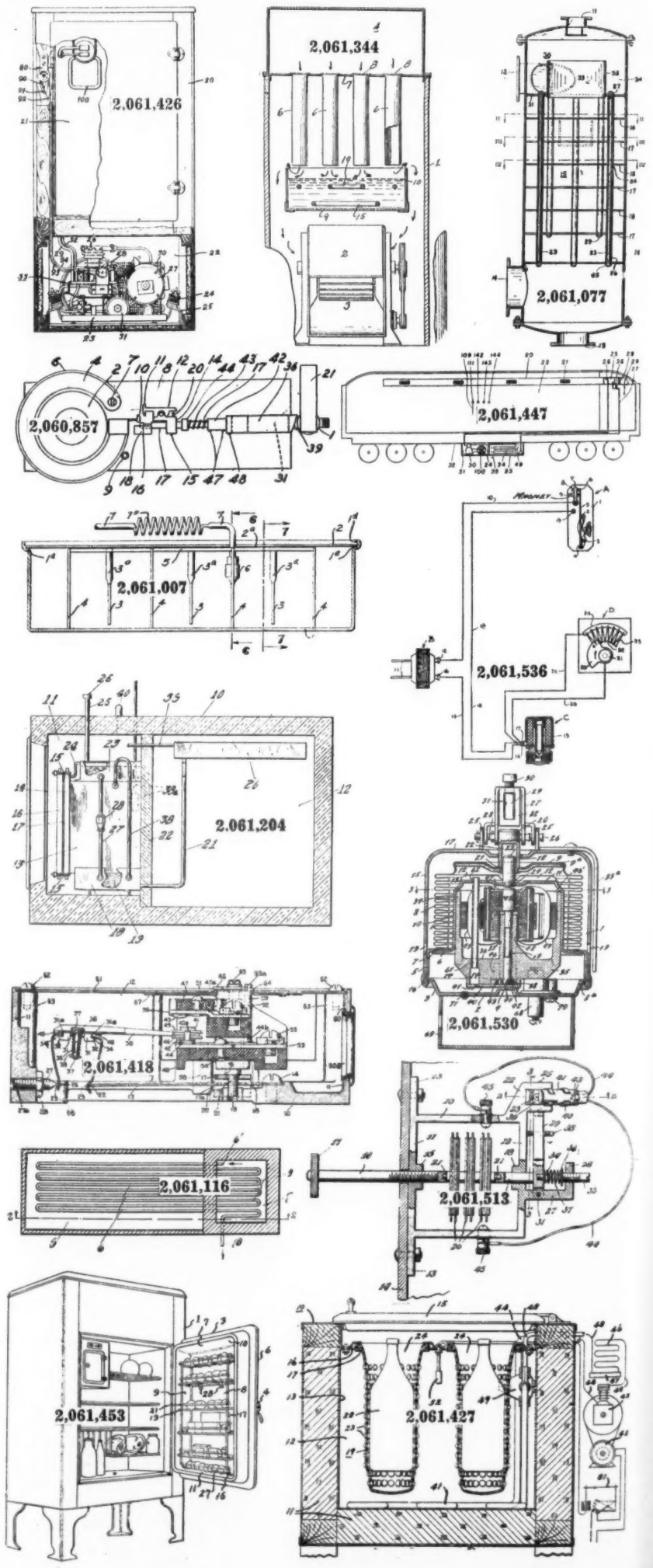
2,061,513. THERMOSTATIC SWITCH. Ernest W. Evans, Vincennes, Ind. Application Oct. 4, 1934, Serial No. 746,907. 3 Claims. (Cl. 200—140)

2,061,530. CONTROL MEANS. Daniel D. Wile, Detroit, assignor to Detroit Lubricator Co., Detroit. Application June 10, 1932, Serial No. 616,539. 13 Claims. (Cl. 60—52)

2,061,536. ELECTRICAL CONTROL SYSTEM. Earnest J. Dillman, Detroit, assignor to Detroit Lubricator Co., Detroit. Application June 29, 1934, Serial No. 732,975. 3 Claims. (Cl. 175—335)

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.



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RATES: Fifty words or less, one insertion, $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning and Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS AVAILABLE

SALES SUPERVISOR to direct the activities of our Commercial Department in the Cleveland territory. Consideration will be given men who thoroughly understand commercial refrigeration and have some knowledge of air conditioning. This opening presents a real opportunity for a man who can assume responsibility and has a good sales record. Full particulars regarding experience and references must be given in first letter which will be held strictly confidential. YORK ICE MACHINERY CORPORATION, 2700 Washington Avenue, Cleveland, Ohio.

OPPORTUNITIES OPEN for several experienced retail salesmen with dealers in central Florida selling Westinghouse refrigerators, ranges, radios, etc. on commission. A good year-round territory; dependable salesmen can make good money. Married men preferred, should have sufficient funds to finance self for sixty days. Write P. O. Box 330, Orlando, Fla.

WANTED—Commercial refrigeration men capable of representing a large, nationally established manufacturer to organize and manage territories. Two positions open. Applicant must be free to travel. Give full technical, wholesaling, and retailing experience in your reply. Our own employees know of this ad. Box 883, Air Conditioning and Refrigeration News.

EQUIPMENT FOR SALE

WE HAVE for sale one (1) Russ Rapid Freezer, Model R-330F in good operating condition, no reasonable offer refused. REX COLE, INC., 25-11 Hunters Point Ave., Long Island City, N. Y. Attention: F. E. Straub.

EXPORTERS—DEALERS. Rebuilt Refrigerators consisting of Norges, Westinghouses, Frigidaires, General Electrics; others from $27.50. Rebuilding done in our own factory on premises. Also carry large stock brand new refrigerators, standard makes, in original cases; for promotional sales. Prices will astound you. Write for information. INTERSTATE REFRIGERATOR CORP., 96 Fifth Ave., New York City.

REPAIR SERVICE

GENERAL ELECTRIC and Majestic hermetically sealed units repaired and exchanged. Guaranteed work. Wholesale only. Give model when writing. All prices quoted f.o.b. Chicago. AMERICAN REFRIGERATING ENGINEERS, INC., 2257 Silverton Drive, Chicago, Illinois.

MAJESTIC HERMETIC UNITS repaired and exchanged at $18.50 f.o.b. our factory Chicago. Every unit undergoes complete tests for temperature, cycling, wattage consumption, and quietness on genuine Majestic test equipment from the Grigsby-Grunow plant. Six months' factory guarantee. REFRIGERATION MAINTENANCE CORP., 365 E. Illinois St., Chicago, Ill.

MAJESTICS EXCHANGED or rebuilt $18.50. Genuine Majestic repair and test equipment and parts used throughout. General Electric household units rebuilt $25. Prices f.o.b. Chicago. Six months' guarantee. Complete Majestic parts price list on request. REFRIGERATION PRODUCTS, INC., 122 West Illinois St., Chicago, Illinois.

MAJESTIC & GRIGSBY GRUNOW refrigerator and radio parts service. The only original and genuine factory parts and service anywhere in the country. All of our replacements and parts carry our unconditional guarantee backed by this reputable organization. Beware of inferior replacements and parts. GRIGSBY GRUNOW CO., 5801 Dickens Ave., Chicago.

SCHOOLS

REFRIGERATION AND AIR CONDITIONING is easiest to understand and explain when we have a clear understanding of the fundamentals. Our extension course is especially practical for executives and service men in refrigeration and air conditioning who lack the technical training. DETROIT SCHOOL OF REFRIGERATION AND AIR CONDITIONING, 4125 Grand River, Detroit, Mich.

TEMPRITE
INSTANTANEOUS
BEER and WATER COOLERS
Detroit Michigan

COMMONWEALTH FITTINGS
Built Right to Stay Tight

COMMONWEALTH BRASS CORPORATION
DETROIT

Questions

Effects of SO_2

No. 2991 (Distributor, Pennsylvania)—"Will you please send me any bulletins of specific information which you might have showing the effect of sulphur dioxide refrigerant on the human body?"

Answer: Ansul Chemical Co. of Marinette, Wis. has published a booklet which treats on the "Physiological Effects of Sulphur Dioxide," and which can probably be obtained by writing to this firm.

Report on Hospital Air Conditioning

No. 2992 (Manufacturer, Pennsylvania)—"The front page of your issue of Nov. 11 carries an article entitled 'Hospitals Report on Benefits of Air Conditioning' which refers to a report of the American Hospital Association Committee on Air Conditioning.

"We would like to know if it is possible to secure copies of this report, if so, the address of the Hospital Association Committee and the price of such a report."

Answer: See below.

No. 2993 (Distributor, California)—"Will you please advise us where we may procure a copy of the publication report of the American Hospital Association's Committee on Air Conditioning mentioned on page 1 of Nov. 11 issue in article headed 'Hospitals Report on Benefits of Air Conditioning.'

Answer: Write American Hospital Association, 18 E. Division St., Chicago, for information concerning this report.

Voorhess' Address

No. 2994 (Service Company, Massachusetts)—"We would like to get some information on the whereabouts of Mr. Gardner Voorhees. He is considered an outstanding engineer in the field of air conditioning. We would like this information as soon as possible."

Answer: Our records show the mail address of Gardner T. Voorhess to be 53 State St., Boston, Mass.

Growth of Commercial Sales

No. 2995 (Advertising Agency, New York)—"We are working on some material for a manufacturer and would like to know something about the rate of increase of the volume of commercial refrigeration equipment purchased in recent years, and the probability of next year's volume.

"In other words, we would like figures showing the growth of commercial refrigeration and air conditioning. Do you suppose you could furnish us with this material in a few days."

Answer: Pages 74 and 78 of the Refrigeration and Air Conditioning Market Data Book give analyses of commercial sales and commercial refrigerating machines sales through the end of 1934. On page 55 of the Data Book are Bureau of Census figures on parts used for air conditioning installations through 1934.

In the March 25 issue of Refrigeration News this year were published figures covering 1935 sales of Commercial Refrigeration Section of the Refrigeration Division of Nema. Sales of display cases and other commercial refrigerators as reported for 1935 by Commercial Refrigeration Manufacturers Association were published in the Feb. 12 issue.

Throughout the year the News has published monthly report on sales by Nema members of commercial units, and also the monthly reports issued by the U. S. Bureau of the Census covering reports of sales by 98 manufacturers of air conditioning equipment.

Data on Small Commercial Units

No. 2996 (Refrigerating Engineer, Illinois)—"Have you any extra copies of Refrigeration News available which contain information on the design, installation and safety requirements of refrigerating machines charged with 15 lbs., and less, of refrigerant?"

Answer: The "Commercial Service Manual" by K. M. Newcum, now being published in serial in Air Conditioning and Refrigeration News, offers much valuable information on the design and installation of refrigeration equipment. The early instalments, which covered refrigerants and safety devices, should also interest you. The Commercial Service Manual will be published in book form sometime next year at the conclusion of its publication in the News.

In the Sept. 4, 1935 issue of Refrigeration News was published the Underwriters' Revised Safety Standards for Commercial Refrigeration Systems. Back issues of the News are available at a cost of 10 cents each.

Cold Water Conditioners

No. 2997 (Air Conditioning Distributor, Iowa)—"We want to secure a list of the names of manufacturers who produce portable air conditioners operating with cold water only. Can you send us such a list?"

Answer: In the July 29, 1936 issue of Refrigeration News were published specifications of all air conditioners manufactured by the principal manufacturers of air-conditioning equipment. In these specifications all conditioners which use cold water are so indicated.

Address of Frostoff Co.

No. 2998 (Distributor, New York)—"In your Nov. 25 issue of Air Conditioning and Refrigeration News you carried an item in reference to 'Frostoff Co. of Iowa.' Would you be good enough to give the address of this company so that I may obtain some information in reference to their automatic defrosting-dehumidifying system?"

Answer: Address this company in care of its main office, Merchandise Mart, Chicago.

Trailer Refrigerator

No. 2999 (Engineer, Illinois)—"There was an article in the Nov. 18 issue of Refrigeration News, pertaining to a refrigerator for auto trailers made by The Aerflo Co. of Detroit. Could you kindly send me the address of the company as I am very much interested in obtaining one of these refrigerators and would like to get circulars on them as soon as possible."

Answer: Address Aerflo Co., 423 Reid Building, 138 Cadillac Square, Detroit.

Market for Frozen Foods

No. 3000 (Advertising Agency, Pennsylvania)—"We are interested in obtaining a general picture of the refrigeration facilities that hotels, clubs, restaurants, retail stores, etc., have available for handling frozen foods such as Birdseye products.

"Can you give us a general idea of the number of refrigerators of this type that are in use by the above mentioned classifications of business?

"To what extent are new installations being made by the refrigeration industry?

"What is the approximate cost of a refrigeration installation suitable for handling frozen food in retail stores?

"Is there any time purchase plan available for dealers on this particular refrigerator?"

Answer: In general it might be said that hotels and restaurants that have good-sized equipment for serving ice cream or with low temperature storage facilities for meat products, can handle frozen foods.

In retail stores, however, specialized equipment is generally necessary.

The refrigeration industry is making few installations through regular sales channels for such purposes; in most instances the retailer procures his equipment through the producer of the quick-frozen food products, generally on a rental basis.

The cost of a mechanically refrigerated installation suitable for handling frozen foods in the average retail stores ranges from $700 to $1,200.

With respect to time purchase plans, it is probable that a standard 20% down, 24 months maximum terms used by the majority of commercial refrigerator manufacturers will apply.

Tiny Refrigerators

No. 3001 (Laboratory, Minnesota)—"We are looking for a very small refrigerating unit or a complete refrigerator of 1 cu. ft. capacity. Should somebody manufacture a complete unit of this size with a compartment door on side or top which can be sold at a list price of $50, we should like very much to get in touch with the manufacturer. Should anyone manufacture an inexpensive small unit, we could have the boxes made."

Answer: In response to a request similar to yours which we published in the Nov. 18 issue of the News, we received a number of replies from companies who can furnish small refrigerators, and these were published in the "Letters" column on the editorial page of the Dec. 9 issue.

Nameplate Makers

No. 3002 (Dealer, Ohio)—"Can you give me some information as to someone who makes nameplates for machines? I am very much interested in finding someone who does this."

Answer: Manufacturers of nameplates are listed on page 232 of the 1935 Refrigeration and Air Conditioning Directory.

Rubber Ice Cube Trays

No. 3003 (Dealer, New York)—"Kindly let us know from what firm we can purchase rubber trays."

Answer: Write to Inland Mfg. Co., 15 Coleman Ave., Dayton.

The Buyer's Guide

Suppliers Specializing in Service to the Refrigeration and Air Conditioning Industries

(Light Commercial Unit)

"CHIEFTAIN"
QUALITY-BUILT COMPRESSORS and CONDENSING UNITS
All bearings diamond bored. Positive lubrication of parts by newly developed process plus forced feed lubrication in all models.
Sizes: 1/6, 1/5, 1/4, 1/3 h.p.
Write for prices
TECUMSEH PRODUCTS CO., Tecumseh, Mich.

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COMPRESSORS
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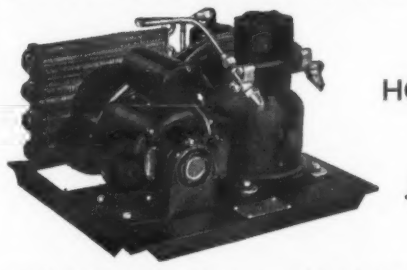
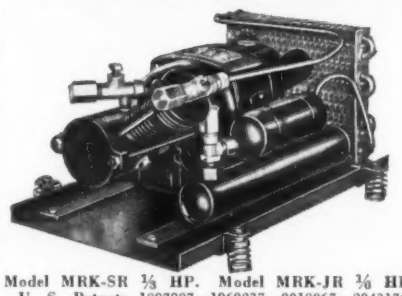
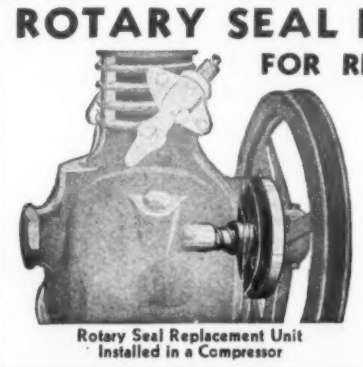
CONDENSING UNITS and COMPRESSORS

FOR HOUSEHOLD REFRIGERATION BY
JOHNSON MOTOR CO.
Waukegan, Ill.
MANUFACTURERS OF THE WORLD FAMOUS SEA HORSE OUTBOARD MOTORS

Commercial Condensing Units
offer you:

Model MRK-SR ½ HP. Model MRK-JR ⅓ HP.
U. S. Patents 1897907—1969237—2018067—2043176
• RADIAL CRANKCASE—MRK-SR cylinder can be tipped 45° right or left to save head space. Total height only 7".
• VIBRATIONLESS—Perfect alignment of parts assured by 4 master tie-bolts.
• PRECISION — Machine finished parts insure clean, scale-free oil.
Write for prices and details
Commercial Refrigeration Co., Inc.
55 South Avenue Rochester, N. Y.

REMPE
FIN COILS - *for Commercial Use*
PIPE COILS & BENDS
Rempe Company, 340 N. Sacramento Blvd., Chicago, Illinois

ROTARY SEAL REPLACEMENT UNITS
FOR REFRIGERATOR COMPRESSORS

Rotary Seal Replacement Unit Installed in a Compressor
• QUICKLY AND EASILY INSTALLED
• SAVE TIME AND TROUBLE
• PREVENT SHAFT LEAKS
With the many acknowledged advantages ROTARY SEAL UNITS are unquestionable the most perfect replacement seal units available
STRONG, ECONOMICAL, SILENT
GUARANTEED TO GIVE PERFECT SATISFACTION
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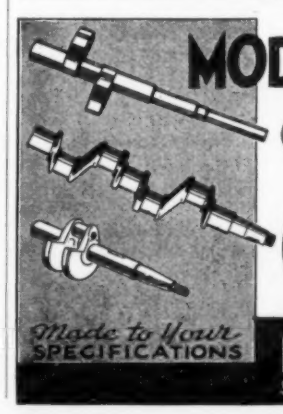
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